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Clinical Medicine and Surgery

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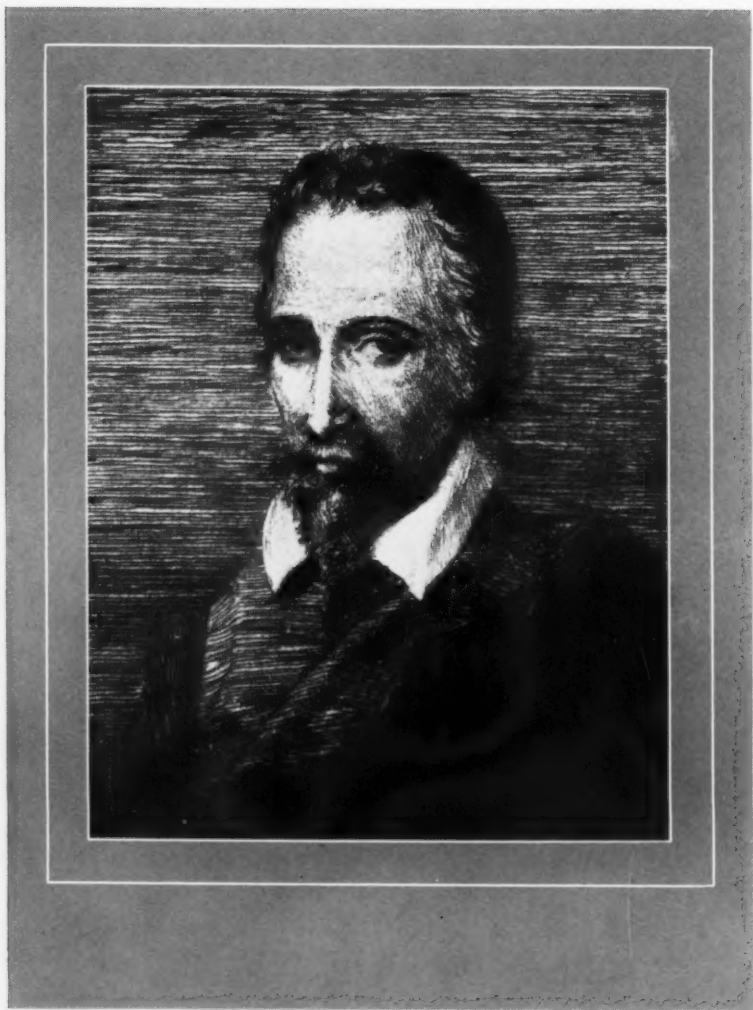


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MICHAEL SERVETUS
MARTYR OF SCIENCE

CLINICAL MEDICINE AND SURGERY

VOLUME 37

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Servetus

WE SPEAK with reverence of this generation's martyrs to science—of the men who have given up their lives that the truth might be known. And we do well. But what must have been the fiber of the courage which prompted men to proclaim the facts as they saw them, when disagreement with the ecclesiastical authorities might (and often did) bring them to the torture chamber and the stake?

Early in the sixteenth century (in 1509 or 1511—authorities differ) Miguel Serveto (his name was later Latinized to Michael Servetus) was born in the Spanish town of Tudela, in Navarre. With this event a great and fearless mind entered a world, darkened by largely voluntary ignorance and torn by bloodthirsty fanaticism.

Servetus was one of the greatest scholars of his age. Whatever he touched—and he dealt with many matters—seemed to glow with the ardor of his individuality. When he edited the geographic writings of Ptolemy, he violated the traditions by mixing the maps with observations on botany, zoology and astronomy, with all of which subjects he was thoroughly familiar, and making that dry subject almost interesting.

In the dawn of medical history the physicians were also priests. If a list could be made of all the disciples of Hippocrates

who have been deeply interested and active in religion since those early days, it would prove a surprise to many. The name of Servetus would be prominent in that list. He had views regarding the nature of the Trinity which, when published, necessitated his hurried flight from Spain, to escape the Inquisition.

In those days, Lyons was one of the world's intellectual centers, and Servetus was drawn there as iron to a magnet. He supported himself by editing various scientific books for a firm of publishers. There he formed friendships with the keen and thoughtful physicians, Camphier and Rabelais (the latter is now a world figure for other than medical reasons) and decided to study Medicine.

In 1536 he entered the University of Paris as a medical student where, among his teachers, he found Sylvius and the intensely interesting "learned beggar," Guinterius, who had, among his other pupils, none other than Andreas Vesalius.

Servetus was graduated, with high honors, in 1538, and became a lecturer at the University, where his wide culture and scholarly attainments attracted the attention of the Archbishop of Vienne, who chose the young physician as his confidential medical advisor.

But the lively and original mind was not content to accept the dogmatic statements of Galen (the "Pope of Medicine") and other authorities, and original thinking was dangerous in those days. Servetus continued to investigate, to think and to *write*—which latter activity was his undoing. His treatise on syrups, published in 1537, was the first rational attempt to avoid incompatibilities and to disguise nauseous doses in pleasant-tasting vehicles; but it criticized some of the ideas of Galen and stirred up such a furore (people took books very seriously in the sixteenth century!) that the author was almost impeached by the Faculty of Paris.

At last, after much study and thought, Servetus produced a work which he called "The Restoration of Christianity," in which he propounded the "horrible" doctrines that unbaptized infants were not loathsome to God (wherefore he is known as an Anabaptist); that the Church and State should be entirely separate institutions; that every man should be free to think as he pleased on religious matters; and that the blood did not ooze through the interventricular septum, as taught by Galen, but passed from the right to the left ventricle through the lungs, where it absorbed the "vital spirit" and became red—the first description of the pulmonary circulation, anticipating Harvey by more than fifty years!

But these heresies could not go unchallenged, and brought him into collision with the cold-blooded protestant bigot, Calvin, who was, if possible, more relentless than the Romish fanatics. After a long trial, during which passages from his book were read as evidence against him, Servetus was condemned to death by fire and, on October 27, 1553, he was chained to a stake, with his book by his side, and cremated alive. The copies of his great work were so thoroughly destroyed that only two are now known to exist, in the libraries of Paris and Vienna. Harvey never had an opportunity to know the work of his precursor.

So passed, in the prime of his life, one of the original geniuses of the medical profession, of whom Victor Robinson has said: "Servetus was the greatest man of his age. His brain was a torch that burned to enlighten the world. He was the irritant that caused the sixteenth century to turn uneasy in its sleep. It could not rest till he was off the earth."

A few centuries ago it was unsafe to be a thinker: Now it is no longer safe to be unable to think.—Manly P. Hall.

HOW OLD ARE YOU?

SOMEONE who knew what he was talking about made the very pertinent remark that a woman who is unattractive before she is thirty can lay the blame upon Nature or her parents: After that, it is her own fault if she is not fascinating.

But even the assimilation of that delightful epigram will not wholly banish the aversion which some women seem to feel against mentioning the number of years which have elapsed since their birth. Even some men exhibit a certain sensitiveness in this matter.

This dread of owning to a life-span of more than twenty-five or thirty years, which many thoughtful people scoff at as a ridiculous bit of superstition, has a perfectly sound psychologic basis in the wholly exaggerated importance which many people still attach to mere years, as a measure of one's age and accomplishments. To some the mere acknowledgment that they have seen the earth make sixty circuits of its orbit brings on a feeling of senility and decrepitude which is destructive to their joy and efficiency and is distinctly to be avoided.

Years are no more adequate an index of age than money is of success. Both are arbitrary symbols, convenient for those who are unable or unwilling to think for themselves, but nothing other than encumbrances to the penetrating observer of men and things. Forty years is the old-age of youth; fifty is the youth

of old-age. It all depends upon one's point of view.

Then again, there are old men who have seen but twenty winters, and joyous youngsters, over whose heads the buds of eighty springtimes have burst into riotous bloom. It isn't what happens outside, but what goes on inside, that makes us old.

When one is buying a piece of calico, one must know its length in order to appraise its value. But, how long is an immortal poem? How many square feet must an unforgettable painting cover? What is the yardage of a song that shakes men's souls? Nobody knows nor cares! The things which the world values beyond price are not measurable by length or breadth or thickness, but by their content of power and that almost indefinable something which, for want of a better word, we call virtue.

When asked how old one is one might say, with pertinence, "Three fine children"; "One happy and inspiring home"; "Ten pictures that have gripped men's hearts"; "Four books that have clarified the world's thinking"; "Two statues that have raised the esthetic standards of a city." How foolish to measure life in years, five thousand of which have been needed for man's paltry achievements in civilization!

How long one has lived is of small moment. The important thing to know about a life is, how much and how well.

Nobody grows old merely by living a number of years: People grow old only by deserting their ideals. Youth is not a time of life; it is a state of mind.—*Theosophical Messenger*.

ERRORS AND AUTHORITIES

EVEN those of us who are not wont to make obeisance, with our forehands in the dust, before the "authorities," are not immune from their influence, as was forcibly illustrated in these columns recently.

CLINICAL MEDICINE AND SURGERY is very carefully edited. If any statement appears, in material submitted for publication in our columns, which is open to the

slightest doubt or question, it is fully verified or corrected before it is permitted to appear.

We *knew*, with shame, that the United States stands practically at the bottom of the list of civilized countries, in the matter of smallpox morbidity and mortality, and when we saw the statement, in a publication whose accuracy we saw no reason to question (we are unable to locate the pesky thing now, just because we need it so badly!), that the 1927 and 1928 death rates were 35,000 and 38,000, respectively, we felt impelled to say a few strong words on the subject, and these appeared on page 174 of our March issue.

Now comes a good friend and reader, from California, and questions our quoted figures, whereupon a search of the records of the U. S. Public Health Service reveals the fact that these were figures for *morbidity*, not mortality—cases, not deaths. The deaths, in 1928, numbered 131, and approximately the same number in 1927. The other statements made seem to have been accurate, as we have checked them carefully.

Even as the matter stands, it is bad enough to constitute a national disgrace. No thoroughly enlightened community needs to have any cases of smallpox, and the cases of this preventable disease which occur in any state or city are a fair index of the intelligence of its people.

In 1929, the states of Arkansas, Kentucky, Maryland, Massachusetts, New Hampshire, New Mexico, New York, Pennsylvania, Rhode Island, South Carolina, West Virginia and the District of Columbia, having a total population of 44,731,000 and compulsory vaccination, reported 1,950 cases of smallpox (4.36 per 100,000); while Illinois, with 7,396,000 people and no compulsory vaccination, had 4,228 cases (57.16 per 100,000). Chicago, which has nearly half of the population of Illinois and vaccinates compulsorily, furnished only 73 cases; while the other half

of the state, without this protection, showed 4,155 cases (in the neighborhood of 106.6 per 100,000).

So, even if our figures were wrong, our idea and our preachment were sound and and entirely defensible.

This is a beautiful demonstration of the fact that one must not unquestioningly accept all that appears in print, which many are inclined to do, if the statements seem to agree with their previous knowledge or prejudices. Common sense must be used at all times, and the more one knows, the broader and more certain is one's basis for coming to a rational decision regarding the value and authenticity of what one reads.

It also shows that this loathsome malady is not the terrible killer it is popularly believed to be, the death rate, in those affected, being only 0.35 of one percent, or about one death in 300 cases. This suggests that there might be merit in abolishing the quarantine on smallpox (thus saving the country many thousands of dollars) and let those who refuse to be vaccinated take their chances, instead of protecting them in their wrong-headed contumaciousness, as we do now.

Truth implies individual discernment and judgment. Authority is the antithesis of truth.—J. Krishnamurti.

LAWS AND PLANETS

OLD SOL has had an addition to his family! That is, not an addition, exactly, but a new census has recently shown that the family is actually 11.1 percent larger than anyone supposed it to be, except a few "queer" fellows who had such a fanatical reverence for laws that they refused to believe that there could be any effects whatever without causes and, when they saw the rest of the family behaving in an inexplicable manner, rejected the idea that their eyes and their brains had gone wrong, and set out, with tireless patience, to discover the reason for the erratic conduct which they had positively and accurately observed.

The discovery of an unknown planet is so rare an occurrence that it has come to pass only three times in more than 5,000 years, and all of these findings have been within the last four or five generations. It may be another thousand years before the star gazers sneak up upon a world that has been playing hide and seek for untold millennia—or not. Who knows? Even the astronomers can do little more than theorize about such things, but their theories *work out!*

We have lost a planet, too, within the past century. Little Vulcan, which was seen by several observers, between Mercury and the Sun, along in the fifties, disappeared some years ago. So the Solar Deity, mayhap, has births and deaths in his family, just like us!

These speculations are all very fascinating and have led to much spirited, if not especially profound, conversation, but when all is said, the existence of a trans-Neptunian planet cuts surprisingly little figure in the lives of most of us, who will, in all probability, never be able even to see it. And, by the same token, the possibility of the existence of even-more-distant members of the solar system matters still less.

What *does*, however, matter, and matter enormously, is the fact that men were able to predict the presence of this cold and isolated neighbor of ours with sufficient accuracy to find it, even when it was not visible to the eye with any ordinary telescope, and first appeared on a photographic plate.

Such a feat could have been accomplished under only one condition: That this little system of ours, in common with the whole of the galactic universe and all the other stupendous aggregations of solar systems which the readers of the heavens call nebulae, is completely and unwaveringly governed by a set of *Laws*, which do not change from age to age—which were operating, in just the same way they work today, when King Pharaoh sat upon the

throne of Egypt in the time of Moses, and will continue to be in effect when our towering cities are hazy memories, like Tyre and Angkor.

It is by virtue of these Laws that all scientific research is carried on and that our lives can proceed, in an orderly manner, to a preconceived goal. Without them the chemist, the physicist and all other scientific workers would be wholly in the dark and could not even imagine which way to turn. It was by means of a thorough knowledge of the laws of the periodicity of the chemical elements, that Prof. Hopkins was enabled to discover the new rare earth, illinium, a few years ago. *Progress, in any line, never comes by accident.*

Things have been moving so rapidly, during the past generation or two, and we have reached such a high level of material prosperity and comfort, that there is a tendency to feel that we are at the apex of the evolutionary scheme and that little remains which we do not know.

A story is told of an old and trusted employee of the patent office who, fifty or seventy-five years ago, handed in his resignation, with the statement that, as human ingenuity could go no further in the matter of inventions, his services would no longer be needed. We laugh at that; but there are many who are now in much the same frame of mind (though they have sense enough to keep quiet about it), and *with just as little reason.*

Who could foresee the era of steam or the age of electricity, even a decade before they dawned upon the world? Who will hazard the declaration that the next quarter-century may not witness the discovery of some now-wholly-undreamed-of force, more powerful and flexible than electricity? Who can guess what revolutionary invention will next appear to change the whole aspect of our lives?

It is well to remember, when we think of the possibilities of discovery, that there are probably far more undiscovered laws

than the number of those we already know; and when we think of the pioneers, in all lines, let us bear in mind that their names are engraved upon the pages of history because they *knew more about the laws of the universe* than did their contemporaries.

There is one safe rule for the man who would live satisfyingly and go forward in his day and generation: Let him learn all he can about the known laws, and then *conform his life to them.* Nature is conquered only by obedience, and he who breaks her laws is, not a criminal, but a fool.

Woe to the intellectual carpenter who, having made a (metaphoric) chair, sits down in it for the rest of his life!—Manly P. Hall.

MEDICAL HISTORY

EQUALITY, as applied to human beings, is a figment of the imagination or a high-sounding rhetorical phrase. All careful and accurate observers know that it does not exist in nature. The common or garden variety of doctor—in which class most of us belong—is *not* the equal of Hippocrates or Galen, Pasteur or Koch, Vesalius or Lister, Osler or Senn.

Why were these men great? What qualities lifted them above the ruck? How can we, too, acquire our own measure of greatness?

The only answer to these questions is found in a study of the history of Medicine and the lives of the men who have made it. Dr. Joseph Collins* says that a physician without the knowledge that comes from such study is like a picture without background or an automobile tourist without reserve gasoline. He says, further, "The teacher who is unable to present the story of Paracelsus or Pasteur, Vesalius or Harvey, Lister or Osler, in such a way as to compete with the theater or the stadium, should be dismissed."

And yet some men consider medical history dry and uninteresting!

*"A Doctor Looks at Doctors"; Harper Bros., New York, 1917.

Two recent successful attempts to make the story of the healing art vital are worthy of notice.

The Fulton County (Ga.) Medical Society put on a spectacle, in Atlanta, which they called "The Return of the Medical Immortals." After their banquet the hall was darkened and, from a side door, followed by the rays of a spot-light, Hippocrates emerged, advanced to a platform and told the audience, in a few minutes, who he was, when and where he lived and what he accomplished. After him followed Galen, Harvey, Hunter and seven other outstanding notables of the profession, each garbed in the costume of his generation and personality and each delivering the message of his contribution to the general fund of knowledge. Scarcely a member left before the end. The parts were played by members of the Society.

Last summer, a play entitled "Aesculapius" was presented in the garden of the Ring Sanatorium and Hospital, Arlington Heights, Mass. The scene was laid in the Temple of Aesculapius, during the fourteenth century before Christ, and the action portrayed the classical story of the Greek God of Medicine and the therapeutic practices of his time. Twelve hundred people saw this production and were deeply impressed. The play is available to medical societies or other groups and can be put on, at small expense, by using an amateur cast.

It seems a bit strange that such measures are necessary to stimulate the interest of physicians in the history of their profession; but since it is so, the desirability of the dramatic visualization of the great pioneers can scarcely be overemphasized.

Here is a really valuable hint to the secretaries of county medical societies, who have difficulty in preparing programs which will bring out a full attendance. We shall be glad to hear of other similar efforts.

Work hard; keep your eyes open; choose friends and books wisely.—Dr. S. Weir Mitchell.

REVIEWING NON-MEDICAL BOOKS

THE reproach is, rather generally and with much reason, cast upon members of the medical profession, that they are broadly speaking, social "duds", because their only conversation is "shop talk."

There is a reasonable excuse—if not a valid reason—for this, in the fact that the practice of medicine requires a large expenditure of time and energy, on the part of the active practitioner, and this alibi is worked overtime by those who are content to roll along in a rut.

Some bluntly state that they have no time to read philosophy, biographies and fine stories, to attend concerts nor to visit art galleries, and are not interested in such things. Curiously enough, these are by no means always the ones who spend the most time in studying the literature of their profession and in attending medical meetings and clinics.

Another group makes the "no time" excuse more or less apologetically and with a certain degree of real or assumed regret. They are too busy for outside reading *now*, which is a shame, but some day—after they retire, perhaps—they will buckle down to it and catch up with the world's thought.

Vain hope! The things a man *finds time* to do are an index of his caliber and his culture. A taste for good literature cannot be acquired offhand, in the interval between one's active years and death. It must be cultivated and strengthened by a lifetime of practice, if it is to prove the solace and support of the twilight days, which it is so thoroughly capable of being.

We are definitely of the opinion that no man can be the highest type of physician unless he is, first, a reasonably good human being. Patients are *folks*, not robots, and, in order to deal with their troubles understandingly, one needs a rather broad outlook upon the widely varied emotional and mental, as well as physical, activities of our generation.

With this idea in mind, we have been, and expect to continue, calling attention, in our department of *New Books*, to thought-stimulating contributions in the fields of philosophy, biography, general science and even, occasionally, a piece of fiction by, for or about doctors or throwing certain light on the problems which physicians meet. This course may be a bit unusual; but then, we never have claimed that *CLINICAL MEDICINE AND SURGERY* is an ordinary journal!

For the sake of efficiency in the present and joy and satisfaction in the years to come, every man should have a hobby. The more directly this avocation engages the powers of the mind, the longer it will last and the more it will help when the flame of physical energy begins to flicker. What occupation fills this requirement better than does sound and inspiring reading?

Read medicine—much—by all means; but do not bring on intellectual and spiritual rickets by a too-rigid restriction of your mental diet.

A definite mental rut is produced when the mind has been focused upon a single subject so exclusively that it is unresponsive to other stimuli.—Manly P. Hall.

CALCIUM GLUCONATE

ALTHOUGH calcium is an important constituent of all animal bodies and of a number of vegetables, its importance in the human economy (where it makes up about two percent of the body weight) has been fully recognized only recently.

There are still many persons (even some physicians) who use the word, lime, as synonymous with calcium. This is an error, for calcium is a soft, lustrous metal; while lime is its oxide (unslaked) or hydroxide (slaked). This mistake is, perhaps, due to the fact that metallic calcium is never found in nature.

The older uses of calcium preparations—the carbonate and glycerophosphate, chlorinated and sulphurated lime, etc.—are too well known to require discussion. Prepa-

arations of calcium and creosote (Calcreose) and calcium and iodine (Calcidin) are widely used in respiratory disorders and other conditions, with good results.

The newer uses of this element began to appear several years ago, with its more or less empiric, but fairly successful, employment in the treatment of hemophilia, albuminuria not due to organic kidney disease, purpura, the so-called allergic diseases and other conditions resulting from undue permeability of the blood vessel walls. Here it was administered, by mouth, as the chloride or lactate. Later, the former salt was given intravenously.

Calcium chloride has, however, a nauseating taste and is decidedly irritating to the gastrointestinal canal, so it never became popular for oral use. Large doses may even cause death, with symptoms of muscular poisoning—low temperature, slow pulse and a tendency to cardiac paralysis. It is also too irritating for hypodermic or intramuscular injection, though it is reasonably well tolerated intravenously, if great care is taken to see that none of the solution escapes under the skin. It has been of service, by this latter route, in urgent cases of hemophilia and purpura, and in intestinal tuberculosis, epididymitis and some other conditions. A patient's tolerance to this salt should always be tested before giving full doses.

Where danger is not impending and parenteral administration is impracticable, calcium lactate may be given by mouth, in large doses (10 to 30 grains—0.65 to 2.0 Gm.), combined with lactose and administered on an empty stomach, with reasonably satisfactory results in many cases.

Since the epoch-making discoveries of the past decade, giving us some light upon the tremendous importance of calcium in the body chemistry and its intimate connection with the metabolism of phosphorus and with the activities of the parathyroid glands, the need for an efficient and non-irritating preparation, suitable for oral,

hypodermic, intramuscular or intravenous use, has become increasingly pressing. Such a salt is now available in *calcium gluconate*—a combination of the metal with gluconic acid, a reaction product of glucose.

Calcium gluconate is much less toxic than the chloride, or any other salt which has been used parenterally, but the therapeutic effect is equal to that of any of the others. It is split up in the body, liberating nine percent of calcium, in a form suitable for prompt absorption, the gluconic acid being readily oxidized and excreted. It is not at all objectionable when given by mouth, and hypodermic or intramuscular injections are practically painless and unirritating. Following intravenous injections, the patient may become somewhat pale and experience a sensation of heat in various regions, with perspiration. Many patients show no reactions whatever.

Intramuscular (which are preferable to subcutaneous) injections are best given, slowly, deep in the upper-outer quadrant of the buttock, in daily or less frequent doses of 10 cc. of a 10-percent, sterile solution (1.0 Gm. of the salt). This should be purchased in ampules, as its extemporaneous preparation is unsatisfactory.

Intramuscular injections of calcium gluconate, sometimes as the main therapeutic resource, and at others to supplement its oral administration, are indicated, in all conditions characterized by calcium deficiency, such as the various allergic disorders hay-fever, asthma, urticaria, etc.; in pulmonary and other forms of tuberculosis; during pregnancy and lactation; in fracture cases, to promote rapid healing; in certain endocrine (especially parathyroid), and functional "nervous" disorders; in a number

of skin diseases, dependent on irregularities of body chemistry; and in various other pathologic states, known or to be discovered, in which the metabolism of calcium is perverted or deficient and time is not a vital factor in treatment.

When immediate effects from the drug are required, it should be given intravenously, slowly and in the same dosage, or repeated every few hours, if necessary. This route of application should be chosen in cases of actual or threatened hemorrhage, traumatic or (especially) purpuric; before and after surgical operations, to hasten blood coagulation and prevent the shock which sometimes follows the rapid loss of calcium; in postoperative pneumonia (and perhaps in other types); in parathyreoprival tetany (a specific), and perhaps in other convulsive conditions; and probably in a number of other disease states.

Calcium medication is almost always rendered more effective by the simultaneous administration of parathyroid preparations (generally intramuscularly or hypodermically), *viosterol* and ultraviolet rays, all of which markedly affect the metabolism of this element. Conversely, when the therapeutic measures, here mentioned as adjuvants, are given as the primary treatment, calcium should be administered at the same time.

It seems highly probable that we have, so far, only scratched the surface of the therapeutic possibilities of calcium; and now that a universally applicable and innocuous preparation is available, in calcium gluconate, the field of its usefulness should be intensively studied by all physicians, and will probably be materially extended in the very near future.

CONTRIBUTOR'S PAGE

For the first time, brief biographic notes regarding our contributors appear on advertising pages 46 and 52. This will be a regular feature, hereafter, so that we can become better acquainted.—ED.

LEADING ARTICLES

Suction Tonsillectomy

By J. B. H. WARING, M.D., Cincinnati, O.

SURGICAL removal of the faucial tonsil is the most commonly performed surgical operation today, and is performed by the general practitioner, the general surgeon and the nose and throat specialist.

In an editorial in the *Journal of the American Medical Association* for October 20, 1928, some very interesting observations are made on the status of tonsillectomy in this country.

Of special interest, perhaps, is the question of incomplete removal of the tonsil. In routine physical examinations of a considerable number of young women on whom tonsillectomy had been performed, Rhoades and Dick found that, in 73 percent of these cases, an appreciable fragment of tonsil tissue remained in one or both tonsil fossae. In other words, three out of every four throats they examined showed incomplete removal of the tonsils. These cases had been operated upon by presumably competent, large-city operators, so the figures may be taken as fairly representative.

The reason for this incomplete removal of the tonsils is not difficult to understand, by any one doing much of this kind of work. Tonsillectomy is a difficult operation, and some cases are very difficult, even when operated upon by skilled surgeons. Some cases, of course, are easier, by comparison, than others; and all are easier when performed by the expert operator. It is unfortunate that the profession as a whole considers tonsillectomy a decidedly minor procedure, to be performed with ease, safety and satisfaction by any physician, with a tongue depressor, tonsil snare, scalpel and scissors.

One reason for the number of imperfect

operations is, unquestionably, because the older tonsillectomy technics are more or less difficult, especially in certain cases. Any operator of experience recognizes the cases that the average operator can "get" only with extreme difficulty, by the Sluder technic, if at all; and the snare and dissection technic, in a blood- and mucus-filled field, is often a trying effort.

Suction tonsillectomy was developed in an effort to obviate the difficulties and dissatisfactions of the older technics. It is an operation so technically simple that any physician of average ability can master it with comparative ease; clean, rapid, practically bloodless, and with a perfect incapsule enucleation of all types of tonsils; equally well suited to local and to general anesthesia operation. Likewise, an operation which removes the tonsils without any damage to the pillars, uvula or underlying throat structures.

DETAILS OF SUCTION METHOD

It might seem, at first glance, that suction tonsillectomy equipment and technic is somewhat complicated. This is not the case. Of course, perfect equipment, plus perfect technic, spells perfect operation, and the equipment and technic used have been slowly and carefully developed over a number of years. The technic, however, is simplicity itself and almost any well-equipped physician today doing throat work, whether general practitioner, surgeon or specialist, has a compressed air and suction pump, tongue depressor and tonsil snare. This, plus a set of tonsil operating tubes, comprises the basic equipment.

Replacing the several snare and dissection instrumentations, and the more or less man-

ual muscular manipulations of the Sluder technic, suction tonsillectomy employs the principle of suction from a compressed air pump, applied through tonsil suction tubes of special design, to lift the tonsil from its fossa, out between the pillars; and while thus held suspended in a semi-inverted position in the tonsil tube bulb, a previously-adjusted, dull, wire snare loop is carried down the shaft of the suction tube, over the bulbous head of the tube, tightened down as it slips off the tonsil tube behind the tonsil, and the tonsil is enucleated cleanly and rapidly "in-capsule"—virtually shelled out in a practically bloodless manner, and almost instantaneously if so desired (Fig. 1). The operation is applicable to both general and local anesthetic work and "gets" all types of tonsils with practically equal ease.

Any type of air pump may be employed, provided it delivers sufficient suction to lift the tonsil from its fossa. Foot-switch control of the air pump and a suction reservoir bottle, to protect the pump and to serve as

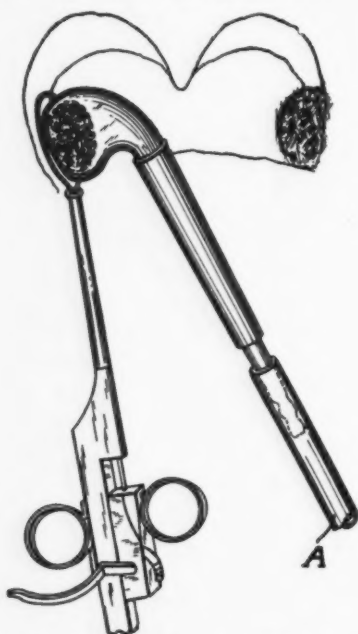


Fig. 1.—Right tonsil completely lifted from its fossa into tonsil-tube mouth, with snare loop carried down shaft of tonsil tube, over its bulbous head and in position for enucleation. (A) Shows end of flexible rubber tubing with end of shaft of tonsil tube engaged. The distal end of this flexible rubber tubing is attached to intake of reservoir suction bottle in front of suction pump shown in Fig. 4.



Fig. 2.—Pierce-Mueller, Beck-Pierce or Beck-Schenck, as it is variously termed, ratchet type of tonsil snare, found best adapted to suction tonsillectomy technic.

a reservoir for any blood or saliva aspirated from the throat in course of operation, are essential. Any type of tonsil snare may be employed, although a ratchet type snare, such as the Pierce-Mueller or Beck-Schenck, as it is variously known (Fig. 2), gives better control.

The operator is free to employ whatever form of general or local anesthesia he prefers. The operation is so rapid that many operators employ nitrous oxide; but I prefer an anesthetic which gives more time. Ether, delivered to a hooded Yankauer mask by the drop method from a semi-automatic anesthesia arm, shown in Fig. 3, gives excellent results in our hands. A mouth gag is employed with general anesthesia; otherwise the equipment and technic are unchanged.

The duplex air pump illustrated (Fig. 4) carries a special hook-up developed for this work; and, in addition to full equipment for routine office work, may be fitted with a flexible-cable bone drill for mastoid, intranasal or other bone surgery. Ether vapor may be delivered from the pressure side of this pump, if desired.

The operating tonsil tubes are made in three sizes, for all types of tonsils, and in use are connected to the suction pump by about four feet of flexible, quarter-inch rubber tubing, running first to the suction reservoir bottle.

TECHNIC

The upright chair position is employed for operating under local anesthesia. The tongue depressor is held in the left hand in operating on the right tonsil, and the right hand for the left. Light is thrown into pharynx from a head mirror or other lighting apparatus.

The tonsil tube is selected which will just approximately include the given tonsil. The snare loop is adjusted over the shaft of the tube and allowed to hang suspended, outside of the mouth, until needed.

The tonsil tube, grasped lightly in the right hand, much as one would hold a



Fig. 3.—Simplex Anesthesia Arm clamped to end of operating table, with dropper can in "off" position. At right of illustration is shown a Yankauer chloroform mask with Waring hood, as adapted to drop-method ether with the Anesthesia Arm. Where chloroform is the anesthetic employed, the hood must be removed from the Yankauer mask, as air intake is too much decreased. When patient is ready for operation, with mouth open and mouth-gag in position, a shift may be made to ether vapor, if desired.

spoon, is carried into the mouth and applied gently to the tonsil with a somewhat scooping motion, from below, forward and upward. The oval mouth of the tube is applied much as the Sluder loop is applied, but without pressure. The posterior lip of the tube slides in front of the posterior pillar, and the anterior lip back of the anterior pillar. For badly submerged or adherent tonsils, the tube mouth is gently pressed over the tonsil between the pillars, which are thus wedged aside.

Suction, applied by foot-switch pressure, instantly lifts the tonsil from its fossa, the pillars being left behind out of harm's way. If the tonsil fails to slip into the tube mouth promptly, it is either held down by dense adhesions or the tube employed is too small for the given tonsil. With dense adhesions, repeated tugs, by starting and stopping the suction with the foot-switch, will slowly stretch them and lift the submerged tonsil out of its fossa. A larger-size tube is substituted, if indicated.

The tonsil tubes are of a special glass, with rubber covered shafts. Metal tubes would destroy the high visibility so essential here. Inspection at once tells the experienced operator when the tonsil is completely lifted from its fossa into the bulbous head of tube. This

may be confirmed by palpation of the anterior pillar by the index finger, when the lip of tube mouth is felt through the pillar; or, if the tonsil is only partly in the tube, the rounded, pad-like bulge of the unengaged portion of the tonsil is felt. Often, this may be gently massaged into the tube mouth, but this is rarely needed.

If the tonsil is improperly grasped, one can release it by disconnecting the slip-on rubber tubing from the end of the tonsil tube, and apply it afresh. The tonsil thus may be picked up and released at will, without any laceration or damage.

If a pillar is partly drawn into the tube along with the tonsil, the tonsil is released and the tube applied properly. No dissection is required, but the tonsil must be lifted properly before the snare is applied. With dense adhesion of the tonsil to the anterior pillar, more skill is required to lift the tonsil properly. With prominent, hypertrophied tonsils, the tube mouth is merely carried into position over the tonsil, when suction instantly lifts it into the tube mouth.

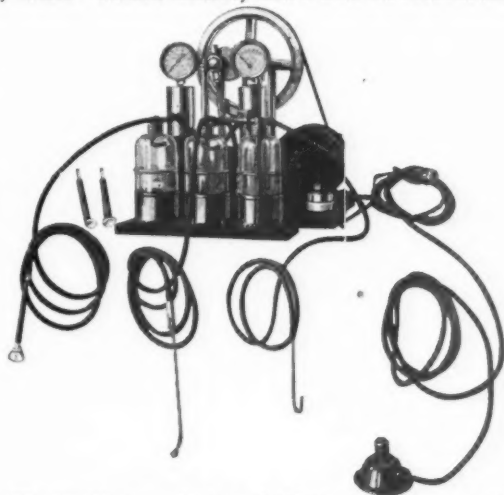


Fig. 4.—Air pump hook-up developed especially for suction tonsillectomy work. For local anesthesia operation, tonsil tube is connected to suction intake of reservoir bottle on right, instead of to left, as shown in the cut. For general anesthesia operation, auxiliary suction line for aspiration runs through first suction bottle on right, on to air intake of pressure pump. The main operating suction line is connected up to the middle suction bottle. The bottle on extreme left carries an ether vapor top and the ether hook, shown on right in cut, is, in operation, connected to this. A flexible-cable bone drill may be attached to shaft of pump motor.

With a little practice, the use of the tube becomes almost automatic.

Suction cleanses the tonsil crypts automatically, and it is astonishing to see, through the clear glass of the tube bulb, the amount of pus and crypt exudate which exudes from the crypts. This potentially infective material is at once drawn into the suction reservoir bottle, with no opportunity for possible aspiration into the air passages, which might result in a lung abscess. I believe that every tonsil should be thus vacuum-cleaned, prior to enucleation by any technic, as there is no question that many cases of lung abscess after tonsillectomy could be thus avoided.

With the right tonsil out of its fossa and properly engaged in the tube mouth, the tongue depressor in the left hand is now laid aside and the snare is grasped in its stead. The right hand meanwhile holds the tonsil tube in position. Under direct inspection, then, in a bloodless field, the snare loop is carried down the shaft and over the bulbous head of tonsil tube. As it is tightened by a direct pull upon the trigger-holds of the snare, the loop slips off the end of the tube and behind the tonsil, which may be enucleated instantaneously, by a continued pull on the snare loop. As a rule, however, I prefer the slightly slower ratchet enucleation, which gives a more nearly bloodless operation. As the snare loop is tightened behind the tonsil, the ratchet trigger is carried back by the little finger of the right hand. Now the right hand grasps and steadies, in a practically parallel position, the snare and tonsil tube. As the snare loop is tightened down by turning the ratchet ring, suction is continued by foot-switch pressure, so that, as the tonsil is enucleated, it remains firmly grasped in the bulb of the tonsil tube, which serves as an efficient grasping forceps, and both snare and tonsil tube, containing the enucleated tonsil, are withdrawn from the mouth.

The tonsil is carefully examined, to see that the capsule is intact, and then the fossa is examined, to see that there are no shreds of tonsil tissue left. Any possible bleeding points are searched for, but in the vast majority of cases the operation will be found practically bloodless. Examination is also carefully made for a lingual tonsil, or for hypertrophied masses of lymphoid tissue below the tonsil fossa proper. Properly performed, it is found that, even with

the badly adherent and submerged tonsil, this organ is enucleated cleanly and perfectly in-capsule. The slow tightening of the snare loop, with the ratchet, pinches through any blood vessels entering the tonsil, and to this is undoubtedly due the practically bloodless nature of the operation.

The left tonsil is removed with identical technic, except that here the tonsil tube is held in the left hand and the snare loop grasped with the right.

A No. 8 snare wire of the best quality is advised; and the snare must be carefully adjusted beforehand, as this operation makes a much heavier demand on the snare than do the ordinary methods. Two snares are employed. In this way, after enucleation of the first tonsil, a fresh snare is at hand ready for the second, without the loss of time consequent upon adjustment of a fresh wire loop in the snare.

For a general-anesthesia operation, a mouth gag is employed, and suction aspiration of mucus and saliva used as needed. Suction cleansing of the throat is rarely required for a local-anesthesia operation. In operating upon large tonsils in small throats, care must be taken that the uvula is not included in the sweep of the snare loop as it is carried over the end of the suction tube,

ADVANTAGES OF THIS METHOD

The advantages of suction tonsillectomy over the older technics may be briefly summarized:

It is, by far, the easiest method; so much so that any operator of fair ability is enabled to do good, clean in-capsule enucleations from his first case. This means better tonsil work. The technic is so simple that dexterity is rapidly acquired, and even the difficult cases become easy by comparison. The general surgeon and the general practitioner who prefers to do his own tonsil work, can do so with suction tonsillectomy easily, cleanly and safely. The specialist can do his tonsillectomies with less effort, more rapidly and better.

The rapidity of the operation is somewhat astonishing. Almost instantaneous enucleation is possible, and even the slightly slower ratchet enucleation is far more rapid than is possible with the Sluder method or with the snare and dissection. Extreme rapidity is not our goal; but the technic is inherently rapid, and this is advantageous to both patient and operator.

The local-anesthetic patient has his tonsils removed so rapidly and so painlessly that he is not frightened or under undue nervous strain. He is not terrified by hemorrhage nor worn out with postoperative hemostatic efforts. His strength is not diminished and no damage is done to the pillars, uvula or underlying throat structures. There is a minimum of postoperative pain, and convalescence is shortened by half.

For a general-anesthesia operation, as in children, only a very brief, light anesthesia is required; consequently they go through the operation easier and recover far more rapidly. The operator works under direct vision in a clear field and with a simple, direct technic. There is no blind groping in a blood-obscured field nor worry and loss of time with postoperative hemostasis.

The operation is practically a "one-man job." Except to steady the head in position for a general-anesthetic operation, there is little for an assistant to do. Because of its practically bloodless nature and the absence of complications, the operation may be performed in the office, or even in the private home, with an ease and safety that compares well with the work in a hospital or clinic, by the older technics.

The technic is identical on all types of tonsils and for both local and general anesthesia. It "gets" all types of tonsils with virtually equal ease and it does not have to be employed only on the "easy" cases, and some other technic on the more difficult.

There is no heavy-handed manual exertion, the operation being one of delicacy and balance throughout. No tedious and often time-consuming dissection is required.

Postoperative lung abscess is practically unknown after suction tonsillectomy, for, immediately upon the application of the tonsil tube, all pus and crypt exudate (all potentially infective material, if aspirated into the air passages) is vacuum-cleaned from the tonsil and carried into the suction reservoir bottle of the pump. This suction cleansing should be applied to every tonsil, prior to enucleation by any method, as it takes but a second or two and does not interfere with the subsequent technic by any method.

The equipment illustrated and the technic employed represent a number of years' constant study and effort towards perfection. Naturally, perfect equipment means more perfect technic. For this reason, every operator taking up suction tonsillectomy should employ proper equipment and proper technic, if he wishes to secure the perfect operation which is possible.

It is easy for one to become unduly enthusiastic, or to become partly blinded to the defects that others can perhaps see in a new operative technic; but the steadily increasing number of operators who have discarded older methods for suction tonsillectomy, and who find the operation everything that is claimed for it and more, affords the best evidence of its merit.

7 E. McMillan St.

GOLF

The game of golf has a peculiar restorative power surpassing all medical or other therapeutic arts. We may be physically and mentally weary from a morning's work. Despite the strenuous physical exertion of an afternoon at golf, our fatigue is lessened, not increased. Fresh air does not explain it. It is a return to the primitive outdoor life. We stride over hill and through ravine; we stumble into ditches; we carry a club and strike viciously at the ball; we follow the ball with the eye and search for it in the grass as our forefathers searched for their arrows and missiles; we use our legs and our arms; we let the nerve currents course through the more ancient channels; we revel unconsciously in latent memories and old race habits and come back to our work rested, renewed and refreshed.—DR. G. T. W. PATRICK, in "Psychology of Relaxation."

Leukocytes and the Healing of Wounds

By BURR FERGUSON, M.D., Birmingham, Ala.

NO PLAN to hasten the healing of wounds has ever been generally accepted by the profession. This confusion is shown by the diverse procedures used in the treatment of these lesions. For example, in the care of an extensive burn, the wound is exposed to the air. To the exposure is frequently added a frame over the bed, covered with a blanket, under which is placed an electric light bulb, to enlist the stimulating qualities of the heat. Perhaps, in the next bed, another open wound is being treated by the application of various germicidal solutions and dressings. The procedures just mentioned seem to be empiric and, in reply to a number of questions among my associates, I have been told that this process of healing was a growth of tissue.

An editorial on "The Epithelial Healing of Surgical Wounds," in the *Journal of the A.M.A.*, December 21, 1929, suggests that "the best way to hasten the covering with epithelium is to secure, in a wound, such conditions as will provide the least amount of exposure inimical to the continued life of the advancing cell membrane." A striking analogy might be drawn between this opinion and that of Hippocrates, who said that every being carried a vital spirit and he was the best physician who interfered as little as possible with the operation of this purely natural force.

The study of the margin of a wound shows a constant mobilization of the white blood cells; blood taken from this area always having a greater number of these mobile cells than is to be found in the general circulation. If these nomadic cells be artificially stimulated, one will see, at once, a marked increase in the rapidity with which the wound is healed. From this observation the conclusion seems inevitable, that the several types of white cells perform an important function in the healing of wounds. In other words, that these cells represent the "vital spirit," as seen by the great Doctor in Athens, and that, by the artificial stimulation of this force, one is, not only adhering to the suggestion of the first of

our kind, in not interfering with a natural force, but is going a bit further by its artificial stimulation.

CHRONIC ULCERS

Late in October, 1929, a man of 55 years came to me with two ulcers of the right ankle: one about 2½ inches in diameter; the other about half this size. The leg was much thickened, from the infiltration, and the ulcers were gray and lifeless, being the unclosed lesions following an extensive second-degree burn of the thigh and leg, incurred twelve years before. The patient said that he fancied he had used all recognized applications and dressings for these wounds and that he was beginning to be discouraged, hence he had come to me because he had heard that anything I might do was not recognized and in this fact there was, at least, a promise of something hitherto untried.

Blood from the margin of the larger ulcer showed the presence of 14,600 white cells to the cubic millimeter. Blood from a finger showed 9,000 in the same amount of blood. I determined to stimulate the "wrecking crew" with alternate injections of a 1:1,500 solution of hydrochloric acid, C.P., in distilled water, in 10-cc. amounts, intravenously, and with colloidal mercury sulphide, 3 cc., intravenously, both drugs being very useful stimulants of the white cells.

Twenty minutes after the injection of the hydrochloric acid, the white count near the ulcer was 16,400, and 11,200 in the general circulation. I told the patient that, if the wounds were reddened and fresh-looking the next morning, they would heal.

When I saw the patient next, four days thereafter, the wounds were much freshened, granulations were more active and the narrow, active-looking, white line of epithelial cells was present at the junction of the skin and the granulating area.

The white cells were stimulated, twice a week for a month, with alternate injections of the colloidal mercury and the acid solution. Marked progress was to be seen at each visit. After four weeks, the white

cells were stimulated once a week; occasionally only once in two weeks.

When I saw the patient last, in March, 1930, the larger ulcer was about the size of a dime, the smaller one was almost completely healed, and the infiltration of the leg and foot had disappeared. Since the patient had to travel a hundred miles to visit me, I turned him over to Dr. Frank M. Johnston, of Tuskegee, to continue the injections of hydrochloric acid solution. My directions for the dressing of the lesions were that he use whatever lotion or ointment gave him the greatest comfort.

Two or three weeks before I saw this case last, he showed, to anyone who cared to look, the first shoe he had used on the infected side since the injury of twelve years before.

My fee in this case was to be one month's salary, to be paid when the lesions were closed. A check received today gives evidence, stronger than the accompanying letter, that this end has been achieved.

Burns, treated by the application of this idea, become a pleasure to dress, because of the clinical changes one may see, and are not turned over to a nurse or an intern.

CHRONIC OTITIS MEDIA

On January 6, 1930, a woman of 66 years came to me, with an infection of both middle ears, which had its beginning, following scarlet fever, when she was a child of six. During this time her ears had been irrigated with the conventional germicide of the particular decade. The discharge was dark in color and had a disagreeable odor. She said that small hang-nails about her fingers nearly always became infected, and that frequently she had an inflammation about the eyes, for which it was necessary to make visits to an ophthalmologist.

Since her first visit I have stimulated the white cells once or twice a week, usually with the hydrochloric acid solution, as there is a rather marked reaction, in her case, from 2 cc. of the colloidal mercury sulphide, and there is no inflammatory reaction after the hydrochloric acid.

At first, there was marked increase in the exudate which, however, soon changed to a yellowish color. This increase was particularly noticeable the day after each injection. This phenomenon is accounted for by the fact that pus is a collection of white cells. Since hydrochloric acid injections

increase their numbers, it logically follows that the amount of pus is increased after the phagocytic activities at site of the invasion of harmful organisms. Our forefathers called this exudate "laudable pus." So do I.

There has been a steady diminution in the amount of discharge and evidences of repair about the membranes in both ears. The patient is totally deaf in the right ear and there has been no change there, but the hearing in the left ear is better.

As an evidence that the white cells do not confine their activities to the infected ears in this case, this patient no longer has infection about her nails nor from small wounds of her skin; neither has she made any visits to the ophthalmologist since the 6th of January.

OSTEOMYELITIS

Early in December, 1929, I began weekly visits to the State prisons near Montgomery, as consultant in infective diseases. I found a negro man in the prison hospital, with an osteomyelitis of the right femur, six sinuses having been made during the eighteen years since its incidence. The thigh was swollen and the patient utterly unable to carry on with the hard labor clause of his sentence. The inflammation seemed to be in the bone, but the germicidal ointment was applied to the skin.

With a fair degree of confidence, I told the assistant that this was another prisoner who was going to work before long. The injections of the hydrochloric acid solution, 1:1,500, were given three times a week during the first two weeks, and, on the 17th day after the first injection, the negro went to work on the road. After this time, the injections of the acid solution were given twice a week. Since this beginning he has been steadily employed on the road, his only relief being on rainy days. I saw him on one of these days and he told me that, of all the bad medicine he had ever had, this injection I had ordered was the worst. Leukocyte counts could not be done on this case as this hospital has no laboratory equipment.

That the white cells perform a most active part in the healing of wounds, may be easily demonstrated, clinically, by the intravenous injection of the solutions I have mentioned, when incised or lacerated wounds are first dressed, or in the treatment of indolent ulcers.

Psychic Factors in Disease

By GEORGE B. LAKE, M.D., Chicago

THERE is an ancient saying which goes back, possibly, to the early dawn of Medicine and which expresses the conception of the ideal state for a man, as it appeared to the fathers of our profession: "*Mens sana in corpore sano.*"

We have repeated this phrase lightly and rather thoughtlessly until, by this very repetition, it has lost the power to stimulate our mental processes to a realization of its full meaning.

Science has given to this generation of physicians such astonishing instruments and methods of precision in diagnosis, undreamt of half a century ago, and such potent drugs and remarkable apparatus for the use of a wide variety of physical agencies in the treatment of disease, that it is small wonder if we tend to feel that, unless a man shows pathologic changes which can be demonstrated in the test-tube or under the microscope, he is not truly ill; and unless his malady is amenable to treatment by chemotherapy, surgery, diathermy, serums, vaccines or some other measurable therapeutic resource he is beyond the reach of our skill.

But medicine will always be, to some extent, an art, for it is as true now as it was twenty centuries or more ago that no human body can be wholly sound unless a sound mind dwells within it, any more than the faculties of attention, reasoning and judgment can show forth their full power and activity through the medium of a brain poisoned with the toxic products of disease or by drugs.

If we would be truly successful physicians, in the fullest sense of the word, we must return to the habit of placing strong reliance upon our trained faculties and ripened judgment, as well as on the findings of the laboratories. We must recognize and evaluate the importance of the psychic factors in disease.

DEFINITIONS

In approaching so large a subject as this, there is profit in formulating a definition or two, so that we may have a clearcut idea of what we are talking about.

When I say disease, I mean any abnormal or unusual condition of the structure or

functions of any of the visible or invisible parts, organs or faculties of a man, by reason of which his efficiency, his joy or his usefulness, to himself or others, is, to any perceptible degree, perverted or curtailed.

And among psychic factors, I include all influences or agencies, residing within or without the man, which, by acting upon his emotions or his mind or both, are capable of modifying his physiologic or pathologic processes (without producing any proximate changes in his anatomic or histologic structures) so that his physical condition is ameliorated or aggravated, as a direct result of the operation of these factors, without the intervention of physically measurable exciting forces

A man is made up, for the purposes of this discussion, of his physical parts and organs and his psyche, which, in turn, consists of his mind and his emotions. The fact that these two parts of the human organism—the physical and the non-physical—act and react upon each other in a wide variety of ways is too well known to require more than passing mention. Every physician of any experience at all can recall many instances where emotional or mental states have caused gross changes in the functioning of the physical organs, and where physical disease has profoundly disturbed the mental faculties and the emotional status of the individual. Dr. George Draper declares, "There is no state of bodily suffering, of whatever kind or degree, whether functional or organic, which does not include an emotional factor among its components."

The psychic factors, which may be operating to produce or maintain the disease condition, for the relief of which the physician's skill is applied, may be conveniently grouped under four heads:

- 1.—Mental diseases affecting faculty or conduct, and so curtailing the patient's efficiency and usefulness.

- 2.—Emotional instability, due to psychic conflicts, defective germ plasm or physical disease and perverting the patient's joy, as well as, in many cases, limiting his usefulness.

- 3.—Erroneous ideas of facts or their in-

terpretation, giving rise to emotional or mental reactions which may be favorable or unfavorable.

4.—External stimuli, affecting the sensory organs, the emotions or the mind in such a way as to produce measurable physical results.

MENTAL DISEASES

As this is not to be a dissertation on psychiatry, no time will be spent in considering the classification and differential diagnosis of the various mental diseases.

It is, however, important that every physician should recognize the early symptoms of the major psychoses, as many patients seek medical advice for what they believe to be strictly physical ailments when, as a matter of fact, the obvious symptoms are secondary to mental disease which is entirely unsuspected by the patient and his family. In order that such cases may not be overlooked, and that the patient may receive the benefit of early treatment by a competent psychiatrist, some clear and simple book, such as Myerson's "Psychology of Mental Disorders" or Hart's "Psychology of Insanity," should be carefully studied, and all the neural reflexes should be tested in every case which is at all obscure.

It is also important that the public should be taught that mental diseases are no different in their general character from other diseases—that there is no disgrace or personal or family stigma attached to them. Only when this fact becomes generally recognized will it be possible to discuss a patient's mental condition, with the patient himself or with his family, as freely and frankly as we now discuss abnormalities in the structure and functions of the liver, kidneys or stomach.

EMOTIONAL INSTABILITY

The importance of the factor of emotional instability in causing and perpetuating distressing symptoms is little recognized by most practitioners. This condition may be due to faulty heredity, the result of dysgenic matings of one sort or another, whereby the progeny came into the world with less power to withstand the strains and stresses of life than has the ordinary person; to the various psychic conflicts so urgently stressed by the psychoanalysts, which may or may not turn upon sexual matters; to exhausting diseases, acute or chronic, which sap the patient's vitality or

alter his normal reactions by poisoning his brain and nerve centers; to bad early training (perhaps the most common cause of all); and, possibly, to other untoward circumstances.

Most of these patients are "chronics." They have been going from one doctor to another for years, with only transient periods of relief. Most of these medical attendants have either prescribed for them without an adequate physical examination or, after going over them very carefully and failing to find any physical abnormality to account for the symptoms, have dismissed them brusquely with the statement that there was nothing wrong with them.

Both of these methods are disastrous to the welfare of the patient and to the prestige of the physician. Every patient who comes to a doctor's office is entitled to an examination sufficiently detailed and extensive to reveal adequate physical causes for all of the symptoms present, or fully to assure the examiner that no such causes exist. In the latter case it is unscientific and untrue to declare that nothing ails the patient. If he were not ill he would not have sought medical advice. His psyche is as much a part of his organism as is his thorax or abdomen and, until it has been painstakingly examined, the study of his case is incomplete.

Care must be taken at this point not to swing to the opposite extreme and class all chronic conditions showing vague symptoms and a general decline of the bodily and mental energy as "neurasthenia," dismissing the patient with a little ill-considered and generally valueless advice and a prescription for a "tonic." We have no right to diagnose psychic instability until we have exhausted the possibilities of physical and laboratory examination without result. In many cases the emotional disturbance which causes the obvious symptoms is founded upon a physical disease, such as syphilis or tuberculosis, which can be discovered by the painstaking diagnostician and subjected to appropriate treatment.

The emotionally unstable individual frequently finds himself unable or unwilling to face the true cause of his distress and, without any conscious knowledge of what is going on, develops a physical symptom or set of symptoms which will protect or save him, temporarily, at least, from the more serious consequences of his psychic inability to deal adequately with the cir-

cumstances in which he finds himself. Infinite patience and deep sympathy are needed to gain the complete confidence of such a sufferer, but this must be done before the physician can hope to arrive at the root of the disorder and determine a sound basis for his efforts toward its relief.

ERRONEOUS IDEAS

Several cases are on record* of experiments upon condemned criminals where the subject has been convinced, erroneously, that some lethal procedure was being carried out (such as that a vein had been opened and that he was bleeding to death), and the result has been as fatal as though the thing had really been done. And, again, people have actually gone to bed ill, as a result of repeated, preconceived comments upon their appearance of illness. Defective vision and hearing sometimes give rise to a sense of inferiority whose cause is wholly unknown to the sufferer.

On the other hand, many a man has recovered from pneumonia or gastric ulcer, because his medical attendant had the good sense to assure him that he suffered from bronchitis or gastritis, when a knowledge of the true nature of his case would have excited so strong a fear as to break down his powers of resistance.

This should not be interpreted as a general recommendation that doctors should withhold from their patients an honest statement of what is wrong with them; but it is a plea that patients should be individualized, in this as in other matters. Some will take better care of themselves and will fight for health more strongly if told that they suffer from some grave malady. Others, given the same information, would surrender and die. We must study our patients with this idea in view and act upon the best information we can acquire.

A patient with a backache may have been convinced, by reading the patent medicine advertisements, that he has an advanced case of Bright's disease; and the fear thus excited may be causing him to lose ground rapidly. If, after a careful uranalysis, one can assure him that his kidneys are sound; and if, at the same time, one can ascertain and remove the cause of the backache, the patient will experience a "miraculous" cure, to which the positive assurance that he has

good kidneys will have contributed as much as the other treatment. This assurance can not be given with power enough to be effective, unless an exhaustive examination of his renal functions has actually been made and the report is at hand.

It is always safe and wise to give a patient good news regarding his physical condition; but the communication of evil tidings should be carefully considered.

EXTERNAL STIMULI

All physicians are familiar with the fact that, in cases of tetanus or eclampsia, the sensory stimuli produced by a person walking across the room, by a touch on the bedclothes or by the sudden flashing of a light may throw the patient into violent convulsions.

If such mild excitants are able to produce such violent effects in these grave disorders, is it not reasonable to suppose that they will produce *some* effects in milder conditions? And that more powerful stimuli may produce decidedly detrimental effects in any case of acute disease, especially since it has been demonstrated that a loud noise, continued for hours, can produce all the signs and symptoms of fatigue?

Too few physicians realize how much assistance can be gained, in the treatment of any case of severe, acute illness, by protecting the patient from unnecessary sensory stimuli—keeping him in a subdued and even light and in a regulated and moderate temperature; excluding all avoidable sounds, especially those that are loud and sudden; forbidding the entrance of visitors, including even the members of the family.

Few people, except experienced physicians, know how to talk to an acutely sick man, and even the most cheerful conversation may cause undue excitement and thus use up energy which is needed for combating the disease; while lugubrious anecdotes and such as suggest the operating-room and the morgue (which are, all-too-frequently, the contribution of well-intentioned visitors of the sick) are a positively destructive force and definitely contribute to an unfavorable outcome.

The proper adjustment of these factors will call for lines of thought and study which are unfamiliar to most physicians and will necessitate a degree of cooperation, by the family and attendants, which is decidedly unusual. If one is to enlist this cooperation, one must know what one is

*I am unable to locate these reports at this time, and therefore hesitate to vouch for their authenticity, though they seemed convincing when I encountered them.

talking about with such precision and certainty that others will be impressed. This requires effort, attention to details and a firm but kindly attitude, but the energy so expended will be well repaid in results.

The chronic patient, on the other hand, who has fallen into a state of morbid depression or psychic insensibility, may sometimes be decidedly benefited by sensory shocks of a pleasing character (or even those which are not, in themselves, so pleasant, so long as they do not arouse fear), which will shake him out of his mental and emotional torpor.

We are in the habit of applying sedative and stimulating drugs and physical agencies when these are indicated. The intelligent and judicious application of psychic sedation and stimulation is capable, in appropriate cases, of producing equally marked and satisfactory results.

Fear and ignorance always go hand in hand, and the physician who is able to give his patients the most valid instruction regarding the truths of their physical, emotional and mental lives, in terms which they can readily understand, will go farthest in giving them that relief and help for which they turn to him.

FEARS AND WORRIES

Fear is always deleterious and disintegrating, and worry is nothing other than chronic fear. The patient who is constantly afraid of something has an up-hill fight in recovering from any malady whatsoever.

This fear or worry need not be with regard to his physical condition. A man may be distressed because he is not carrying enough life insurance; because his rent is overdue; because some cherished undertaking has failed. A woman may be violently perturbed because she has discovered a few gray hairs or "crow's feet"; because she fears she is losing her husband's love; or because her children are getting out of hand. Both men and women have actually died because they feared the loss of friends or social position or had a feeling of remorse for past mistakes.

In this connection it may be advisable to call attention to the fact that adult, civilized man is a moral, as well as a physical and intellectual being. The individual who has committed some act which he recognizes as being contrary to his own moral code or to that of the community in which he lives, frequently suffers from a series of mental

and physical reactions which are readily recognizable as disease. The evil effects of masturbation or other sex irregularities, when not practiced to excess, fall into this category. Unless the physician is skillful and sympathetic he will never uncover these deeply-buried causes of morbid physiology; and unless he is unusually wise and in possession of a workable life philosophy he will be unable to remove them, even when discovered.

Every one of these conditions, and scores of others which appear equally irrelevant, can and often do have definite effects in causing disease states and in retarding recovery from definite, physical, pathologic changes. They are not immaterial and foolish and they deserve the earnest attention and study of the physicians who aspire to achieve high and lasting success.

To the patient there are no "little things," and the doctor who overlooks *nothing* is the one who wins his confidence. Every circumstance which affects the patient's physical, emotional or mental life may be a factor in the production or maintenance of his abnormal and disabling symptoms—for every symptom of disease is disabling, to a greater or less extent. The sum of the losses of energy and efficiency through seemingly insignificant departures from a state of perfect comfort would suffice to transact all the business of a great nation.

A PHILOSOPHY OF LIFE

One of the most prolific causes of lowered psychic tone is a lack of any coordinated idea of what life is all about. If a man has no conception as to where he is going, it profits him little to be on his way, for his chance of arriving anywhere is small.

Any kind of a philosophy of life is better than none at all, but some are better than others. Orthodox religion has not the hold on the people that it once had (which may be well or ill, as one looks at it), and that may be one of the reasons for the increase in the incidence of so-called nervous diseases during the last generation or two. It is probable that many of the cures attributed to Christian Science were the result of supplying the patients with a life philosophy which, whatever it may have lacked of science or Christianity, was coherent with itself, appeared reasonable to the persons concerned and gave them a definite goal for their endeavors and a reasonable hope of definite accomplishment.

The physician who hopes to give every possible assistance to each of his patients must search for a philosophy of life which will bear scientific scrutiny and will answer all reasonable questions. (There are such). He must then prepare himself to impart it to those who are without such a compass to guide them, and to assist them until they are able to see their way alone.

The cheerful doctor, other things being equal, will produce the best effects upon his patients. Remember how that wise, old Israelite, King Solomon, remarked "A merry heart is a good medicine."

SUMMARY

1.—Psychic factors often play a definite part in initiating or perpetuating morbid conditions.

2.—Actual mental disease is not uncommon and should be considered in dealing with obscure cases which show few or no physical signs.

3.—Emotional instability appears to be

increasingly prevalent and is the chief factor in the psychoneuroses, and one to be reckoned with in many cases of apparently purely physical disease. The greatest tact and patience are required in diagnosing and treating these cases.

4.—Erroneous ideas of fact may operate potently toward the outcome of an illness. The only cure for ignorance is sound instruction.

5.—External stimuli may determine death or recovery.

6.—Fears and worries may arise from an almost infinite variety of circumstances and may produce measurable physical effects. Here, again, the widest human sympathy and the gentlest methods are essential to get at the bottom of the trouble.

7.—A coordinated philosophy of life and a cheerful outlook are essential to him who would achieve the highest success in the practice of medicine.

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Sexual Impotence of Organic Origin

By EDWIN W. HIRSCH, M.D., Chicago

SEXUAL impotence is frequently regarded as an entity, and aphrodisiacs are freely prescribed to restore the lost vitality. Such treatment constitutes the practice of empiricism and is akin to prescribing an antipyretic for a patient with fever, without attempting to ascertain the cause. Fortunately the treatment of symptoms alone, in medicine, is rapidly disappearing, and in the field of sexology, too, physicians are beginning to realize that a host of different conditions may undermine the sexual health and accordingly search for the basic lesion.

Before we enter into a study of the various organic causes of sexual debility, we must try to formulate a fundamental conception as to the manner in which erection is brought about. Then one can realize, more quickly, how tissue changes can interfere with the process.

INITIATION OF THE PROCESS

Sexual stimulation is usually initiated by a direct impression of something associated with the feminine and is perceived by one

of the special senses. By the senses of hearing, seeing, smelling, tasting or feeling, impulses are sent, via the optic, acoustic, olfactory, glossopharyngeal and spinal nerves to the sexual centers in the cerebrum. These sexual areas in the brain may also be aroused indirectly by the process of association; e.g. the pleasant odor of a perfume may recall a previous sex impression and this may be sufficient to awaken the sexual system. The ingestion of alcohol may have a similar effect, but it acts by directly stimulating the nerve fibers of the brain. Erection may also be induced without the participation of the brain, as in nocturnal pollutions.

Usually, however, the sexual urge is derived from the higher sexual centers which have been sufficiently activated. Stimuli are then transmitted down the spinal cord to the erector centers, located in the lumbar and sacral cord and in the sympathetic ganglia along the cord. From here, impulses are conveyed to and from the various sympathetic ganglia, in the sexual organs. By the action of the *nervi erigens*, whose fibers are derived from the third and fourth sacral

trunks and sympathetic branches, a vasodilatation of the arteries of the penis ensues; the erectile bodies are engorged with blood; and the penis increases four to five times in size. The blood pressure is also heightened.

RIGIDITY OF THE ORGAN

Blood is brought to the penis by the internal pudendal artery, a branch of the hypogastric, which gives off the following branches: Dorsal artery to the penis; the deep artery to the erectile bodies; branches to the urethra, bulb and perineal muscles. Stasis of blood within the *corpora cavernosa penis* and *corpus cavernosum urethrae* (*corpus spongiosum*) is due to vasoconstriction of the veins and external pressure against the veins, which block the egress of blood. When the blood sinuses are filled with blood, the firm tunica albuginea is forced to stretch, but as long as this elastic envelope is under tension, it too is contracting and constricting all the veins of the penis. Thus a state of equilibrium exists between the centrifugal force of the blood within the cavernous tissue and the centripetal pressure exerted by the investing tunics of the penis. The rigidity of the penis is due to the continued volumetric increase of the erectile tissue within the firm, fibro-elastic sheaths.

OLD THEORIES OF ERECTION

The *ischio-* and *bulbo-cavernosi* muscles and the transverse perineal muscles are frequently termed the muscles of erection and are supposed to compress the veins of the penis, hinder the outflow of blood and draw the penis into the erect position. This theory originated from Varolius' work, who, in 1573, stated that the root of the penis was constricted by the *ischio-* and *bulbo-cavernosi* muscles, and thus the venous return was shut off.

In 1668, de Graaf helped substantiate this view, by producing an erection in a cadaver. This he did by tying a ligature around the base of the penis and injecting water into the penile arteries. Erection, he argued, was the result of venous congestion, mechanically induced by the perineal muscles.

Santorini (1775) stated that the muscles of the prostatic and membranous urethra retarded the return of blood.

The majority of the 19th century anatomists were in accord with these hypotheses, and no dissenting voice was heard

until 1877, when Cadiat conclusively proved, by his dissections, that the routes followed by the blood vessels of the penis were such that compression by the perineal muscles is impossible. This work disproved the theory that erection was brought about by the perineal muscles constricting the penile veins. Anyone may corroborate these facts by consulting a good anatomy.

PHYSICS OF ERECTION

One of the enigmas of sexual physiology is the manner in which the penis is drawn into the erect position. At one time the *ischio-cavernosi* muscles were looked upon as the force which pulled the organ upward; but the origin and insertion of the muscle is sufficient to contradict such an opinion. The most reasonable explanation is offered by Luciani, who points to the fact that the dorsal surface of the penis is shorter than the ventral side and, when the organ becomes turgid, it is drawn through an arc by the short axis—the upper layer—in the only direction possible, which is upward. In this task it is aided by the suspensory ligament of the penis.

NERVES OF THE PENIS

The nerves leading to and from the penis act as the regulators and controllers of erection. Seven principal sympathetic plexuses are involved, namely; the hypogastric, deferential, aortic, mesenteric, spermatic, prostatic, and cavernous. The mixed nerve, *pudendus communis*, conveys the sensory branches to the penis, via the dorsal nerve of the penis, and the motor branches, via the perineal nerve. Vasomotor fibers are contained within the *nervi erigens*.

On the skin of the glans and in the fascial layer beneath the skin are found special nerve endings which are known as Krause's genital nerve endings, Meissner pressure bodies and the Vater-Pacini corpuscles. Excitation of any of these fibers may induce erection, through a reflex arc, in the following manner: The stimulus is received by the genital nerve bulb and communicated to the dorsal nerve of the penis; thence to the *pudendus communis* nerve, which carries it to the sacral spinal ganglia; then to the erector centers in the sacral cord, where the impulses are relayed to the *nervi erigens* which, in turn, charge the cavernous plexus and nerves. This section of the cord is also termed the pelvic brain and may allow erection and ejaculation to ensue

without the participation of the higher centers. This we see illustrated in pollutions, where, during the unconscious state of sleep, the distended bladder may press against the prostatic or seminal plexus and bring about erection and ejaculation.

There is also a very vital connection between the endocrine glands which secrete the hormones essential for sexual feeling and the sympathetic nervous system, whose nerve endings are sensitized by the secretion of the testicle, thyroid, suprarenal and pituitary glands. During erection these glands undoubtedly pour an excess of secretion into the blood stream to augment the body metabolism and muscular tone, so essential for sexual contact.

EJACULATION

Ejaculation ensues when the erector center has been sufficiently stimulated, and is the termination of the sexual act. The secretions of the vesicles and prostate mix in the prostatic urethra and are ejected by the contraction of the *bulbo cavernosi*, prostatic and urethral muscles. Walker thinks that the membranous urethra is shortened and this favors the escape of spermatic fluid by aspiration. The verumontanum, also known as the colliculus seminalis or caput gallinaginis, is considered by many urologists to play an important part in the ejaculatory mechanism, in that it swells up and dams off the internal urethral orifice, so that semen cannot flow into the bladder. There is, however, no material evidence to support such an assumption, but sufficient to contradict it. A study of its histologic structure reveals no erectile tissue. Besides, its function is to emit secretion and it is very dubious that this tiny elevation could serve in this capacity and simultaneously plug the urethra.

RESUMÉ OF PHYSIOLOGY

The physiology of erection is a most complicated process and depends for its successful operation upon a large number of factors, all of which must work in unison.

This implies that the brain, cord, autonomic and spinal nerve system, must be competent to send and receive adequate stimuli from the normal genital organs; the heart must maintain a sufficient blood pressure to distend the erectile bodies; the blood must be in a healthy state and free of such pernicious elements as occur in severe anemia and leukemia; the blood

vessels of the penis must be free enough of sclerotic changes so that they can dilate and transmit quickly a large quantity of blood to the erectile bodies; the erectile tissue must be freely elastic and devoid of dense scar formation; the muscular tone must be good; and the endocrine glands must secrete an adequate supply of hormones.

If one or several of these factors fail to function the erectile capacity is seriously interfered with.

The following outline will facilitate the diagnosis of impotence, for etiologic factors are grouped by systems.

SEXUAL DISABILITY DUE TO MECHANICAL CAUSES

Erection usually is a physical impossibility when any of the following congenital conditions exists:

- 1.—Absence of the penis (aphallie).
- 2.—Abnormally small organ (microphallie).
- 3.—Absence of glans penis.
- 4.—Absence of erectile bodies.
- 5.—Penis grown to scrotum (synochus).
- 6.—Accessory urethrae.
- 7.—Unformed urethra (fissura genitalis).
- 8.—Epi- and hypospadias, extending a considerable length of the urethra.
- 9.—Hypospadias *perineo scrotalis*.
- 10.—Congenital stricture of the urethra.
- 11.—Congenital fistula of the urethra.
- 12.—*Ectopia vesicae*.
- 13.—Hermaphroditism and pseudo-hermaphroditism.
- 14.—Double penis (diphallus).
- 15.—Bone in the penis or erectile bodies.

Loss of erectile power usually follows gangrene of the penis, be it of bacterial, chemical or mechanical origin. The extensive slough, incident to a gangrenous process, is replaced by an overproduction of scar tissue, which destroys the elasticity of the erectile tissue. Poisonous gases, such as were employed in the World War, often burned the penis and scrotum extensively.

Penile gangrene is occasionally self induced by subnormal impotents who, either consciously or under alcoholic influence, slip metal bands or rings over the penis, with the thought of producing a permanently rigid organ. Intense pain and edema result from the congestion, incidental to such unyielding constriction, and unless the obstructing band is summarily cut,

tissue death ensues, with loss of a part or the entire organ.

Pathologic enlargements of the penis, such as extensive carcinomas, condylomas, elephantiasis or hemangioma, may mechanically interfere with coitus. Enormous swellings of the scrotum, such as varicocele, hydrocele, hematocele, lipoma, scrotal hernia or tumors of the testes, may prohibit the union of the sexual organs.

Permanent injury to the erectile bodies may follow gunshot or shrapnel wounds of the penis, severe lacerations of the perineum, mutilations of the penis or scrotum, either by mayhem or self-induced, fistulas of the urethra, and from the erosion incidental to phagedenic ulceration.

Fracture of the penis, a rare form of injury, is usually the result of self-inflicted trauma. Gonorrheics, who suffer intensely from a chordee, may ignorantly attempt to "break" the chordee by violently striking the penis with a heavy object. Death from shock or hemorrhage has resulted in some cases.

In an effort to stop the progression of a virulent phagedenic ulceration, surgeons have often resected, amputated or burned portions of the penis. I have seen many disastrous results from such treatment and have found that mild antiseptic measures will finally conquer almost any erosive infection.

Prostatectomy renders some men impotent. Lieschied, as a result of a study of 50 prostatectomies by Voelker's method, in men ranging from 53 to 83 years, found that 18 had good sexual power after the operation; 4 had a moderate potency; in 20 it was slight or poor; and in 10 it was completely lost. It has been my experience that, where the suprapubic method of enucleation is employed, the sexual status is the same after the operation as it was before; i.e., men potent prior to the prostatectomy, are capable after it.

Plastic induration of the penis is a common cause of impotence in elderly men. It is characterized by the formation of cartilaginous or bony plaques within the erectile bodies. The masses may be easily palpated and their gristly character is readily perceived. These structures interfere with the elasticity of the erectile bodies and cause an uneven distribution of blood in the cavernous tissue, with the result that erection is both imperfect and painful. The process begins by a deposition of lime salts

within the arterial walls. A low grade infection is usually the etiologic factor.

DISORDERED SEXUALITY OF ENDOCRINE ORIGIN

Thyroid. Myxedema or hypothyroidism in the male is associated with a decreased or absent libido. Magnus Levy reports the case of a man, age fifty-four, whose potency returned after a cure of this illness.

In cretinism there is a hypoplasia of the genitalia, the libido is weak or absent and the secondary sex characteristics are poorly developed. Dwarfism is also partly the result of deficient thyroid activity. The sex organs have been stunted and the sexual appetite is not appreciable.

Pituitary. Acromegaly and gigantism are the result of hypersecretion of the pituitary. Acromegalics are usually impotent, while hypervirility is often an initial symptom in gigantism. But the giants, too, eventually lose their masculine powers. *Dystrophia adiposo genitalis* (Fröhlich's syndrome) is due to the hypoactive pituitary and is characterized by an abnormal deposit of fat, atrophy of the generative glands and a subnormal development of the secondary sex qualities. The genitalia are infantile in size. Cysts or tumors of the hypophysis, will weaken or destroy sexual power.

Gonads. Infantilism, as described by Lorrain, refers to that condition in which body development stops at a certain infantile stage. The libido, genitalia and other sexual qualities are like those of a child (Falta).

Eunuchoidism, according to Tandler and Gross, is that state found in individuals who, without being castrated, entirely simulate, in their entire clinical manifestations, the true eunuch type. This undoubtedly is due to changes in the interstitial cells. The penis, prostate, seminal vesicles and testes are smaller than normal. Axillary hair is usually absent; pubic hair is scant and has the feminine distribution. Sexuality is incomplete and of short duration. Bilateral cryptorchism generally causes destruction of the vital testicular tissue.

Eunuchism is a sequel of castration. If performed before puberty it obliterates the erectile power; if performed later in life it may or may not destroy the ability to perform coitus. In some countries, castration is performed as a religious ceremony and, in these emasculated subjects, we can study the effect of the testicular hormone upon sexual and body development. The Skoptics

or "White Doves," a religious sect of Russia, practice castration to insure "purity." If the operation is performed prepuberally, the genitalia do not develop, a beard does not appear and the pubic hair has the feminine distribution. The skin is pale and swollen, there is an increased amount of subcutaneous fat and fatty deposits are found around the buttocks, breast, abdominal wall, especially suprapubically and in the face. The pelvis is juvenile in form, the larynx is infantile in shape and its usual prominence is lacking. Absence of sexual desire and general apathy are pathognomonic.

True Hermaphroditism is the occurrence of the internal and external organs of generation of both sexes in one individual. It is doubtful if such a case exists.

Pseudo Hermaphroditism is that peculiar developmental stage in which the external organs of generation of both sexes are found in a rudimentary condition, in one individual. The generative glands of only one sex are found. An hermaphroditic female—an hermaphrodite in which the female genitalia predominate—may be a male in character, if the gonad be a testis. An hermaphroditic male may dress, feel and act like a woman. Biedl points to a plausible explanation of this bisexual state by considering the gonads to be normally bisexual with small portions of the endocrine tissue of the opposite sex remaining.

Disorders of the Pineal Gland. Tumors of the pineal body usually cause a precocious sexual development in boys. This effect is not induced by an excess of its internal secretion, but rather by compression of the ganglia at the floor of the fourth ventricle. (Belfield).

DECREASED SEXUAL POTENCY DUE TO ORGANIC LESIONS OF THE CENTRAL NERVOUS SYSTEM

Diminished potency usually follows severe injury to the brain or cord, cerebral hemorrhage, thrombus or embolism, cysts or tumors of the brain, lethargic encephalitis, meningitis, multiple sclerosis, myelitis, progressive paralysis and tabes. Occasionally priapism may precede the impotence in tabes, myelitis, multiple sclerosis and leukemia.

A most interesting case of reflex atrophy and retraction of the penis, in a young man of twenty-five, following a herniorrhaphy, is reported by Wilson. The man

had apparently normal genitalia prior to the operation, but for six weeks following the operation, the penis gradually diminished in size and became permanently small and retracted.

ACTION OF DRUGS ON THE SEXUAL POWER

Addiction to the use of morphine destroys the libido and erectile power. Several clinicians have reported that sexuality has been depressed by the continued use of bromides. Chronic arsenical poisoning is said to have a similar effect. Saltpeter is alleged to have the remarkable property of abolishing sexual desire. The purported results, which are supposed to be obtained by its use, are legendary. Chronic alcoholism injures the nervous mechanism and gradually induces impotence.

DECREASED SEXUAL POWER DUE TO DEBILITATING DISEASES

Temporary or permanent loss of sexual activity may follow typhoid fever, influenza, diabetes, pernicious anemia, gout, syphilis, arteriosclerosis, nephritis, cachexia and senility.

Syphilis exerts its pathologic action on the important blood vessels to the erectile bodies. The process begins either by a proliferation of the endothelium or by a splitting of the intima. The new-formed tissues gradually occlude the lumen and prevent the amount of blood essential for erection, from reaching the penis. Since the artery is infiltrated, it cannot dilate, and engorgement of the penis is impossible.

LOCAL CAUSES OF SEXUAL DEBILITY

Tuberculosis of the prostate and vesicles, prostatic abscess, chronic seminal vesiculitis, prostatic or urethral stones, hard strictures of the posterior urethra, an unretractable foreskin or a short frenum may distinctly interfere with the process of erection. Excessive masturbation, excessive indulgence in coitus or prolonged abstinence has an injurious effect on the sexual power. Tumors of the verumontanum or of the erectile bodies, though rare, may destroy the erectile capacity. An embolus in the main penile arteries or a thrombus in the main vein will prevent erectibility.

OUTLINE OF TREATMENT

Congenital malformations of the external genitalia, presenting gross defects, are usually best left alone.

Circumcision is advised for cases of phimosis, short frenum or warty excrescences.

Tumors of the scrotum (hydroceles, hematoceles, scrotal hernia, etc.) should be corrected surgically. An enormous, bilateral hydrocele, of long duration, often destroys the testicular tissue by pressure atrophy. The sexual prognosis in such a case is guarded and one should be certain to leave some testicular tissue within the scrotum.

Glandular defects should receive adequate endocrine treatment. The presence of definite bisexual body changes usually contraindicates treatment.

Old luetics, paretics and tabetics, who have lost their sexual power, do not usually regain it. Young, impotent syphilitics respond well to antiluetic treatment.

Cases of prostatitis, seminal vesiculitis and stricture need appropriate urologic treatment. Tuberculosis of the prostate and vesicles implies sexual doom.

Deleterious sexual habits, such as coitus interruptus, must be substituted by a method which insures satisfactory sexual depletion.

The treatment of organic impotence is determined by the etiologic factor and basic pathology. Hence, one cannot attempt to aid a patient with a non-psychic sexual inadequacy, unless an accurate diagnosis, based on urologic study has been made. It must, then, be very apparent that the method of treating all cases by aphrodisiacs or by "rejuvenation surgery" is preposterous. Yet this, in a large measure, is what physicians have been led to do. Someone introduces an operation which purports to rejuvenate. The fad is taken up and reaches popular favor by widespread publicity. Credulous patients, under the influence of suggestion, vouch for the wonderful results attained. Physicians, too, become gullible and are enticed into performing the operation by the patients, who by a simple bit of surgery, wish to blot out tissue alterations and revitalize a defunct sexuality. Almost any physician can do the operation, and almost every one does. But the day of reckoning is soon at hand, for results have not always been forthcoming, and a host of impotents are poorer and, perhaps, wiser, but no better.

Some years ago, the dorsal vein of the penis was ligated for impotence, on the supposition that the passive congestion artificially induced would aid the erectile power. One surgeon even claimed that his patients developed priapism before they left the operating table. Some cases of psychic impotence were cured, because of the neurasthenic's implicit faith in the power of surgery. A few clear-visioned urologists disapproved the utilization of a method without any clinical or experimental foundation. Ultimately, a large army of duped patients convinced themselves and the profession that the secret of youth was not to be attained by the use of scalpel or ligature.

During the past decade, another new (?) rejuvenation operation was introduced. It consisted of tying the vas deferens, so that the hormones essential for libido and produced by the interstitial cells, would be conserved. But certainly the operation was not new for, 75 years ago, the vas was being ligated as a cure for prostatic hypertrophy. Let us grant that blockage of the vas will increase the vital secretions produced by the cells of Leydig. Can we picture such substances remaking new penile arteries; or causing the calcium deposits within the vessel walls to absorb; or dissolving the scar tissue which has replaced the intima of the helicine arteries?

The urologist cannot remake tissue. Some cases are beyond his aid; others he can improve; and some he can return to a normal condition. No one has ever been able to make young tissue out of old tissue, and the urologist should not be expected to accomplish the impossible.

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Cryptitis

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CRYPITIS is an inflammation of the crypts of Morgagni. In order to understand the pathology of cryptitis it is necessary to review some of the anatomy of this part of the rectum.

The mucous membrane of the lower part of the rectal ampulla is thrown into longitudinal folds as the lumen of the bowel narrows to the constricted anal canal. This folding of the mucosa permits snug closure of the anus when the sphincters are contracted, and also accommodates itself to full dilatation, without injurious stretching, when the anus is opened for the passage of feces or for instrumentation. Between each two folds there is a depression of the mucosa, the lower end of which terminates in a cup-shaped pocket, known as an anal pocket or crypt of Morgagni. Some of these crypts are but slight depressions, while others form distinct sinuses.

The mucosa at the lower end of this interfold depression is loosely puckered into a semilunar fold, which very much resembles the semilunar valve of the heart, and is often referred to as an anal valve. This area, known as the anorectal line, *linea dentata*, *pectinate line* or the *white line of Hilton*, is of special interest because it is the seat of inflammatory changes which produce symptoms apparently out of all proportion to the lesion.

PATHOLOGY

The function of the crypts of Morgagni is not fully understood. It is thought that they collect or secrete mucus, presumably to lubricate the anal canal during the act of defecation, the mucus being expressed from the crypts by the pressure of the feces, thus lubricating the muco-integumentary portion of the canal which has no mucosa to lubricate itself. The fecal mass, at this juncture, has to overcome the contraction of the external sphincter muscle; hence, the necessity of some sort of lubrication at this part of the canal. Since the function of these crypts is so essential, it is important to be able to recognize a healthy crypt from a diseased one. Otherwise, great injury may be done to the function of defecation by removing healthy crypts.

The crypts' mouths, being directed upwards, it is very easy for substances coming down through the anal canal to lodge in the crypts and irritate them. It may be hardened feces, fecoliths, seeds, needles, pins or any hard substances with a sufficiently small point to lodge in the crypt. Frequently cryptitis is an extension of a procto-colitis or the mouth of an internal fistula opening into the crypt.

When hardened feces become lodged in a crypt, the tendency is to collect additional feces, until the pressure becomes so great that irritation is set up, finally resulting in pressure necrosis and thus exciting a cryptitis that may become chronic; or a persistent ulceration may result, that, if left untreated, may cause a fissure, or go on to abscess and a final fistula.

If the pressure is not sufficient to cause necrosis and ulceration, the irritating mucus secreted may burrow down subcutaneously, forming a sinus with a large skin tab externally. If the irritating mucus passes out at the muco-cutaneous border, an excoriation will result. Also the inflammation of the crypt will cause hypertrophy of the neighboring papilla, the composite irritation later causing spasticity of the external sphincter and sphincteralgia. The pathologic changes are often of a low grade and cryptitis has been looked upon by some as a neurosis, being referred to at times as "an insane rectum".

SYMPTOMS

The symptoms of cryptitis are not pathognomonic, but may be produced by any inflammatory disease of the anal canal.

A constant, dull, aching pain in the anus or rectum is the chief symptom, being accompanied usually with a feeling of heaviness. The pain is increased during defecation, following strenuous exercise or prolonged standing, and is relieved by sitting or by pressure on the perineum. If abscess threatens, the pain becomes so intense that the condition may be mistaken for anal fissure or neuralgia of the rectum.

A low-grade, chronic inflammation may involve all the tissues of the anal canal and the aching pains may radiate to the sacrum, down the legs (resembling sci-

atica), or may simulate sacro-coccygeal neuralgia.

Reflex pain and spasm of the neck of the bladder may cause prostatic irritation, frequent micturition or urinary retention, and thus prostatic disease is erroneously diagnosed, or, in the female, dysmenorrhea or amenorrhea may throw suspicion on the generative organs.

If the inflammation were confined to the mucous coat of the bowel, there would be comparatively little trouble in eradicating it but, unfortunately, the infection often involves the areolar and muscular coats and even extends to the perirectal tissues. In this manner, not only are sacs or ulcerating pouches formed, but sinuses burrow various distances up the bowel or outward under the perianal skin, causing an itching, not relieved by scratching, though not a true pruritis. These septic foci constitute a frequently overlooked cause of pruritis ani. As the mucopus is imprisoned in these sinuses, the overlying structures—mucosa and skin—become puffy and more or less sensitive. If the accumulated excretion is confined beneath a thin layer of tissue, it is easily recognized during the examination. When fecaliths or other foreign substances become lodged in a crypt, they may cause excessive itching or pain, until removed by the passage of feces or otherwise.

Pain in some form (usually sphincter-algia) is the most frequent cause for which patients apply for treatment. Inflammation and edema of the mucosa cause contraction of the sphincter, and the spasm of the sphincter increases the pain. A burning, stinging pain is usually due to hypersecretion of mucus. If a complete fistula exists, the irritating discharge will cause an excoriation of the mucosa and the anal skin. Sometimes, if the discharge is excessive, the anal margins may be glued together.

DIAGNOSIS

With a history of the above symptoms, cryptitis should be suspected and a careful examination made. With a fenestrated, conical speculum in the rectum, the window is slowly rotated and each crypt or pouch fully exposed and carefully explored for the lodgement of foreign bodies or ulcerations. With a fine straight probe, every crevice or depression in an upward direction is explored (Fig. 1), while a bent probe searches all recesses extending

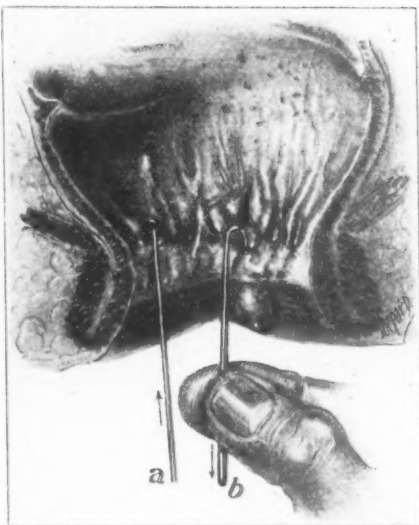


Fig. 1.—Searching out the anal crypts.

downward. The probe should be of silver, very fine, and should offer no resistance to the tissue. It should be remembered that a probe may easily be introduced into the crypt and through its walls into healthy tissue beyond.

If a crypt is inflamed or a channel discovered, the introduction of the probe will occasion severe pain and cause the patient to flinch and cry out. It is therefore necessary to minimize this suffering by applying a pledget of cotton soaked in a 10-percent solution of cocaine. Local anesthesia should be resorted to only in extremely nervous patients, as the anesthesia will obscure the condition of the crypts. The probe, introduced into a healthy crypt, causes very little pain, if any; while, in an inflamed crypt, the pain is excessive. This is often the only criterion of a deviation from the normal. So it is easy to see how anesthesia may cause the examiner to overlook a mild or a beginning cryptitis, by obscuring the evidence—pain on probing. If there is much sphincter-algia, the sphincter must be desensitized. This can be done with a 1½-percent solution of *Butyn*. I prefer *Butyn*, as it acts quicker than the other local anesthetics and the effect lasts equally long.

During our search it will usually be necessary to examine the patient in different positions; first, perhaps, having him lie on his left side and later on his right or in the knee-shoulder position. Some-

times only a small spot of abnormal discoloration will be noticed; or, again, there is abundant evidence of inflammation. The patient may be able to assist in locating these areas by directing attention to those parts which are most tender or sore, and which are usually referred to as giving a sensation of heat. The discoloration of these spots is usually reddish-brown or brown. If there are no special points of tenderness, the areas of most intense itching will serve as a guide to the underlying retention pockets.

TREATMENT

Beginning or mild cases of cryptitis can be cured by making topical applications through a slanting anoscope. The feces must be kept soft and each diseased crypt thoroughly cleansed, by flushing with water, before any medicament is applied. A syringe with a straight or angulated nozzle is essential to get to the bottom of the crypt. Dental syringes act very well.

After the crypt has been flushed clean, it may be bathed with 2-percent solution of Mercurochrome, or for more active stimulation, a probe is dipped into pure ichthyol and passed in through the speculum until the crypt is reached. With great care the probe containing the ichthyol is then passed into the crypt and in this manner the ichthyol is applied directly to the ulcerated area. This process is continued daily until all pain has disappeared, and this can best be demonstrated by passing an ordinary probe, bent as described, and thus testing the crypt.

If there is much destruction of tissue and a burrowing process is much advanced, it will only be a waste of time to make topical applications. A cryptectomy should be done at once. I do not advocate the splitting operation, as recommended by some, because the cut surfaces may reunite and the operation prove a failure; or else, ugly flaps may remain, causing a continual source of annoyance. The entire valve must be removed and the pocket completely obliterated. This may be done with the scissors or a scalpel, hooking up the membrane with the angulated hook and removing it in its entirety. If there are any sinuses leading down from the diseased crypts, they should be excised. It is not necessary to put the patient to bed after an operation of this kind, as the maneuver causes very little

inconvenience—only a slight soreness for a few days—though, usually, a fortnight is required for the parts to heal completely. No general anesthetic is necessary. Local anesthesia acts excellently. Care must be exercised not to over-distend the tissues, as the operator's landmarks will be obliterated.

If the sinus extends down into an external skin tab, this should be removed. Sometimes a sinus will extend a considerable distance out under the skin, and at some point in the raphe, either anterior or posterior, will be found the site of most intense itching, burning or pain, from which branch channels may lead to distant points.

The exquisitely tender or sensitive points are frequently the external evidences overlying sero-mucous sacculations and are vantage points for opening the subcutaneous channels. Such an area may be completely blocked off with ½-percent procaine solution and opened down to the fatty tissues. Quite a large cavity may be found, filled with broken-down, blood-stained or brownish-colored tissue. This tissue must all be removed with a curette and a search made for channels leading from this cavity, and it is often surprising to find the probe slip along a considerable channel.

Other channels may be found, extending out on the buttocks, sometimes encircling the anus or extending widely to the scrotum or thighs. After an opening has been effected into the diseased area, anterior or posterior to the anus, the channel may be laid open toward the anus or away from it, without severing more than a few fibers of the external sphincter.

AFTER-TREATMENT

As soon as the patient is returned to his bed, if he is hospitalized, or before he leaves my office, if he is ambulatory, I introduce a suppository of:

Stramonium Ext. grs. ½ (0.032 Gm.)
Thymol iodide.....grs. 2 (0.130 Gm.)
Acetanalidgrs. 2 (0.130 Gm.)

and then put on a snug pad and T-binder.

The patient's bowels are not put at rest. He is not given an opiate, except for pain. On the evening of the second day he is given one ounce of mineral oil, by mouth, and a similar dose night and morning thereafter, as needed to insure a soft, un-irritating stool. If the bowels do not move

on the third day, he is given, that evening, a level teaspoonful of compound licorice powder.

Each night and morning, beginning on the second day, the patient is given a warm sitz bath, to keep the external parts clean and to relieve local congestion.

Every third day, all granulating surfaces are swabbed with Mercurochrome and, if granulations seem sluggish, they are touched with ten-percent silver nitrate solution.

If extensive channel formation has taken place, so that mucus reservoirs are formed at various points in the tissues about the buttocks, a persistent flow of irritating mucus may continue to cause annoyance. Under such circumstances,

further search must be made for mucus channels or sacculations, until all have been reached and destroyed. Irrigation can sometimes reach these channels through counter openings, thus avoiding the necessity of opening the channel its whole length. If a probe, introduced into a sinus, can be observed along its course until the point comes near the skin, it is well to make a counter opening at this point and irrigate the channel through and through. There are, usually, but one or two main sinuses, although numerous small branches may exist; but when the principal ones are treated the smaller branches will cause no further trouble.

30 N. Michigan Blvd.

The Mouth During Pregnancy

By S. OWEN BROOKS, D.D.S., Albuquerque, N. M.

FROM time immemorial, one of the great banes of motherhood has been the destructive changes which take place in the mouth of the pregnant woman.

Authorities concede the condition to be of katabolic etiology or due to defective nutrition, but inasmuch as the exact *modus operandi* of the process is not understood, it is not reasonable to conclude that the local abnormal conditions which are constantly found are altogether innocent of the blame in this troublesome and sometimes serious condition.

Certain changes take place in the mouth of the pregnant woman that are not found under any other circumstances. Thus, sialorrea, nausea, eructations of acid contents of the stomach which upset the normal alkalinity of the oral secretions, trophic disturbances incidental to the drain on the mother's system in order to produce the growth of the fetus, and certain nerve disturbances pave the way for the undermining of the tooth foundation, which conditions are so familiar to dentists.

It is impossible to conceive of Nature's failure to provide for these devastating processes, in the same manner that she so prodigally prepares the rest of the system for this, the crowning jewel in the casket of gems of maternal accomplishments.

No doubt, modern living conditions do their part; but one thing, the error of which is obvious to the thinking man, must not be overlooked: The opinion of many (which is founded on no more basis of truth than the adherence to ancient ideas, superstitions and ignorance) that the mouth of a woman during her gravid period is to be considered inviolable, regardless of degenerative changes taking place therein, and that no scientific method of cleaning should be practiced, much less any dental procedures be indulged in.

The degenerative changes in the mouth during pregnancy are, beyond a doubt, the only processes existing during the course of pregnancy which are not designed to fortify the system against the ravaging effects of childbirth.

Pregnant women, even in the advanced stages of tuberculosis, will increase in weight and, by all appearances and clinical phenomena exhibited, lead one to think that the processes of this terrible disease have been suspended and that Nature has bestowed the boon of a cure upon the mother, in return for her effort to effect the preservation of the species.

It is not an unusual occurrence for the pregnant woman to seek the advice of a dentist, in an effort to be relieved of these

conditions, and to find that, already, there is nothing that she can do except to submit to the extraction of some of her teeth, if not all of them.

There is something fundamentally wrong when a woman, otherwise well, must anticipate the forfeiture of one of her most valuable assets (from a utilitarian standpoint of health and happiness), and lay her teeth as a sacrifice upon the altar of motherhood. It is pathetic to see the increasingly prevalent condition of tooth degeneration and decalcification that is so common in our dental clinics and offices.

Fidelity to our expressed theory, that local conditions are paramount as the causative factors for the degenerative processes, would demand that the first and important procedure to pursue would be to advise the adherence to a religiously strict regime of proper mouth hygiene.

The digestive disturbances characterized as the morning sickness of pregnancy—the distressing and sometimes dangerous vomiting known as hyperemesis gravidarum—no doubt could be mitigated by the application of a rational and scientific care of the oral cavity.

The frequent rundown, anemic and asthenic conditions found by physicians, following childbirth; the inability of so many mothers to suckle their infants; the debility which is coincident to the puerperium; and a train of symptoms which the average mother attributes to childbirth and as the penalties of motherhood, might have their inception in conditions which an unhygienic mouth enhances.

It should be emphasized repeatedly to the expectant mother (as soon as conception is known to the physician) that proper oral hygiene plays an important part in the prophylaxis of distressing and sometimes dangerous conditions during the puerperal state. Any dental work necessary to put the teeth and mouth in a healthy condition should be advised, emphasis being necessary

in some cases to overcome the traditional ideas that pregnancy is a contraindication to dental manipulations.

CONCLUSIONS

Much has been done; much remains to do. It is a professional duty to eradicate, when possible (by medical or dental manipulations), irritating, distressing and defective conditions found in the oral cavity, as soon as a conception is known to the physician or dentist.

A strict regime of oral hygiene should be impressed upon the expectant mother and carried out by her. The technic and material to be used is within the scope of all. It requires simple skill and will add no great expense. The gratifying results will prove its worth.

Greater results may, however, be expected when a healthy mouth is supported by the use of other agents which are therapeutically designed to fortify the drain of the mother's system against the ravaging effects of child birth.

Irradiated ergosterol in oil (Viosterol) is now demanding the consideration of the medical profession, due to its potency in supplying vitamin D, which regulates the metabolism of calcium—an essential element in preventing malnutrition of the bony structures during pregnancy.

Ultraviolet radiations (artificial or natural sunlight) are an assurance for an increase in the metabolism of calcium and may prove a boon to motherhood, in stabilizing the body chemistry, thereby restoring the normal secretions of the mouth.

That the body, in the process of developing the fetus, does not extract calcium from the teeth is now generally believed, but the abnormal secretions of the oral cavity, together with unhygienic conditions found in the mouth, are chiefly responsible for the devastating processes which take place during pregnancy.

Hillcrest Sanatorium.

SOME HYGIENIC APHORISMS

If we could just put over the important relationship between our food and our heart muscle, our blood pressure, our joints and our digestion, we would relieve much suffering, diminish the drug bill, cut the cost of medical care and perhaps actually prevent the development of much disease.—DR. L. LANGSTROTH in Survey Graphic, Jan., 1930.

Injection for Varicose Veins with Fatal Outcome

(A Case Report)

By RAYMOND C. MUNDT, M.D., *Oconomowoc, Wis.*

THE injection treatment of varicose veins has, of late, received considerable attention in both Europe and America. Pravaz, who in 1851 invented his syringe for the injection treatment of aneurysms, is given credit for originating this form of therapy. It came into practically no use, however, until 1911, when Linser¹ commenced the use of mercuric chloride for the obliteration of varices. In 1922, Sicard² worked with sodium salicylate, and Genevri³ with quinine and urethane, in 1923.

It is not difficult to see why this form of treatment should become popular, because of its effectiveness and comparative ease of application, for both the patient and the surgeon. Radical excision is a major undertaking, involving an extensive operation and requiring two or three weeks' immobilization in bed; while the injection treatment is ambulant and does not usually entail any suffering or hardship.

Recurrences are much more common after excision than after injection. Cook County Hospital statistics show 11 recurrences in 50 cases in 1927; Bernstein⁴ found no improvement in 20 percent of 351 patients; Jeannel⁵ had poor results in 33 percent of 1,019 patients; and Kovacs⁶ reports 30 percent of failures in 1,400 patients. Recurrences by the injection method vary from 1 percent, reported by Gaugier, to 7 percent reported by Linser.

There are a few complications arising from the injection treatment, such as local necrosis, caused by the chemical getting outside the vein. This, however, may be avoided by careful technic. De Takats⁷ had no necrosis in 1,000 injections.

The most feared complication after any treatment for varicose veins is pulmonary embolism. Most of the deaths following excision have been due to this cause. Authorities⁸ state, however, that the blood in varicosities does not flow towards, but away from, the heart, or remains stationary when the patient is not recumbent. This should

make for safety in avoiding pulmonary embolism and delay systemic absorption of injected chemicals.

Forestier⁹ reports more than 4,000 injections without a fatality; Sicard and Gaugier report 15,000 consecutive cases with no mortality; Linser¹⁰ had 15,000 cases without a fatality; Genevri¹¹ 4,000 cases; Douthwaite¹² 2,000 cases; Meisen 2,000 cases; and, in this country, De Takats⁷ 120 cases without a single fatality. McPheeters¹³ was able to find only 7 fatal cases in a total of 53,000 treated, giving a mortality of 0.0132 percent. Four of the deaths were from pulmonary embolism; one case in Germany, reported by Hammer¹⁴, was due to mercurial poisoning; one case died of thrombophlebitis¹⁵; another of septicemia.

The method of excision shows a much greater mortality, as reported by Bernstein¹⁷, whose mortality was 0.7 percent. Kilbourne¹⁸ obtained replies from 34 large hospitals, with 4,607 cases and an average mortality of 0.4 percent.

According to these statistics, the case herewith reported is the third fatality from this treatment in the United States and the eighth in the world.

REPORT OF CASE

Miss R., age 58, a spinster of slight build and nervous temperament, was seen in December, 1928, with varicosities of the left leg. Other complaints were nervousness and hot flashes, but these were not marked.

Physical examination showed no abnormalities besides the varicosities, except slight softening of the heart tones. The blood pressure was 166/90 and the heart rate 80. The urine was normal. The varices, some of which were tortuous, occupied the anterior, the two mid-lateral and the lower posterior surfaces of the leg. The mid-anterior aspect showed a large, protruding dilatation, about 4 cm. in diameter.

She received ovarian substance, subcutaneously and by mouth, with, apparently, some relief of the hot flashes and nervousness.

As a cure of the varicosities without operation was sought, the injection treatment with sodium salicylate, as recommended by Forestier⁹, of France, et al., was selected. The first treatment, given on December 17, consisted of 5 cc. of a 20-percent solution, divided into 3 injections and given with the patient sitting. This

was well borne, so, on the 19th, 5 cc. of a 30-percent solution was similarly used. This series was worked up until a 40-percent solution was used, and a total of 20 cc. of the latter was given.

As the only result from this treatment was a slight lessening of the caliber of the smaller varices, with apparently no effect on the larger ones, it was decided to use mercuric iodide, 1 percent, as further recommended by Forestier for cases in which sodium salicylate was ineffective.

Mercuric iodide, 1 percent, with sodium iodide, 1 percent, dissolved in distilled water and filtered, was injected (2 cc.) on January 19. As there was no reaction, 3.5 cc. was given on January 23; 4 cc. on the 29th; 5 cc. on February 7; 4 cc. on February 13; and 7 cc. on February 19. In these treatments the solution was, of course, divided among the different varices. The last dose may seem enormous, but it will be noted that the dosage was worked up, at weekly intervals. Urinalysis remained negative and the patient felt well all the time.

It will be recalled that doses of mercury, comparable to these, have been given in syphilis without ill effect. It must also be noted that systemic absorption is claimed to be much reduced in varicosities and, in many cases, the chemicals appear to act on the veins locally, without systemic effect.

The blood pressure had now fallen to 154/90; the pulse was 76 and regular; and the patient was in as good general condition as when the treatments were started. However, the required obliterating effect did not occur and, on February 25, 4 cc. of quinine and urethane¹⁴ was given. A slight buzzing in the head resulted, so no further treatment was given until March 5, when 4 cc. more of the same solution was used. More symptoms of quinine intolerance resulted, so this drug was abandoned.

No obliteration having resulted from these various chemicals, the patient was again advised to submit to surgery but again refused. On April 12 she came in, apparently in better health than ever, and desired to try more injections. Urinalysis was again negative and, as it was nearly two months since the last mercurial injection, 4 cc. of this solution was again injected. The last previous dose having been 7 cc., this was considered a sufficient reduction.

The next morning the patient came in looking pale and weak, and reported that she had suffered during the night with vomiting and purging. No urine had been passed since the previous day; the throat was sore and the breath fetid. As these symptoms pointed toward mercurial poisoning, the patient was advised to go to bed and to take fluids and alkalis.

The general condition remained good but, as the anuria persisted, in spite of three 16-grain (1.06 Gm.) doses of Diuretin (theobromine-sodium salicylate), the patient was taken to the hospital on the evening of the third day, April 16, where 500 cc. of 10-percent dextrose solution was given, intravenously; the patient was kept in a warm, dry pack; and liquids were pushed, by mouth. The blood pressure had now fallen to 130/90, the pulse was 80, and the temperature was normal. The general condition was good.

The second day in the hospital the patient

was unable to retain the forced fluids, so these were given through a duodenal tube, which was kept in place for 18 hours, until the stomach became retentive. Blood chemistry tests showed a creatinine value of 5.5 mgm. per 100 cc. During this time the bowels were acting freely and free perspiration was maintained. The fluids by mouth consisted of water, citro-carbonate solution and 20 percent Karo (dextrose) in water.

At this time an unfortunate accident occurred. The electric pad used for the dry pack caused an extensive first and second degree burn of the patient's back. This is thought to have been due to collection of the profuse perspiration and the lessened resistance of the tissues, as the patient was being watched by a nurse and did not complain of the heat. This burn complicated the case considerably, as it did not heal in spite of all treatment and became an oozing surface from which the edema drained. The burn was treated with tannic acid solution, 10 percent; later with ointment of balsam of Peru. It finally seemed to do best when cleansed with Dakin's solution and covered with perforated Cilkoid and dry gauze.

The 10-percent dextrose solution was repeated, in 500 cc. quantities, several times and, on the fifth day of the anuria, about 60 cc. of urine was passed. This was heavily loaded with albumin, casts and red blood cells. After this, a few drops of urine were passed at a time, but none could be collected for several days. A 2-percent sodium carbonate solution was given by proctoclysis several times, to combat acidosis.

The tissues showed considerable edema by the third hospital day. The face was puffy and all the subcutaneous tissues showed edema, but the treated leg the most. The patient was weak but rational and complained of no distress, except in the back.

Sodium thiosulphate, 0.5 Gm., intravenously, was now started and continued daily for 15 doses and then on alternate days for five doses. Salivation and a mercurial gingivitis were present, as well as a severe ulceration of the patient's tonsils. The breath was fetid. A saturated solution of potassium chlorate was used frequently on the gums, mouth and pharynx.

The patient seemed to become worse on the fifth hospital day, April 21. The edema was greater; the abdomen distended and tender; the blood pressure had risen to 160/90; dyspnea was present, with a rate of 36; and the heart rate was 96. The patient was in great distress and had to be propped up in bed. Venipuncture was done and 500 cc. of blood were removed and replaced with 2-percent dextrose solution. The patient brightened up at once and the symptoms of danger disappeared. Blood chemistry tests the next day showed a creatinine value of 4 mgm. per 100 cc.

There followed now a period of three weeks during which the patient appeared to hold her own. She was uncomfortable because of the burned back and, at first, was unable to lie on the side because of respiratory distress. The blood pressure remained between 140/90 and 150/90 and the pulse 80 to 90. However, the latter was controlled by digitalis, which was given 1½ gr. (0.1 Gm.) three times daily, interrupted, and given as the heart responded. The temperature remained normal until about

the fourth week of illness, when it started to vary between 99° and 101°F.

The same fluids were given by mouth, but milk, diluted orange juice and grape juice were added, the combined fluid intake being maintained at about 1,500 to 2,000 cc. daily. Later, a small amount of vegetable soup and Jello were allowed.

Attempts were made to ascertain the urinary output, but this was impossible, as the patient usually passed some urine with the bowel movements; amounts of 100 cc. were, however, collected at different times, and showed only a trace of albumin and no red blood cells, the specific gravity was 1.010.

For several days after the venesection, 500 cc. of 20-percent magnesium sulphate solution was given, by rapid proctoclysis, and helped to draw fluid from the system. This also relieved the tympanites, which at times was distressing. Toward the last there were several liquid stools daily and a good deal of fluid was eliminated in this way.

The blood count, a few days after the venesection, showed 3,200,000 r.b.c.; 11,000 w.b.c.; and a normal differential count. A blood chemistry study, on May 7, showed creatinine, 9.4; and on May 14, 9.3 mgm. per 100 cc.

The gums and tonsils cleared up about the third week, and the patient did fairly well, except for an occasional "weak spell" at night. During the first two or three weeks she obtained very little sleep, due to the fact that she could not lie in a comfortable position. Opiates and sedatives were avoided, because it was desired to spare the heart and the patient did not seem markedly uneasy.

For a time the edema lessened, so that scarcely any pitting could be produced anywhere on the body, with the exception of the treated leg. However, as time went on, the edema increased again and, at times, there was some pulmonary edema, causing cough and respiratory distress.

The patient was taken home in an ambulance May 11, and felt relieved to be in her own bed again. At this time, fluids could not be pushed beyond 800 to 1,000 cc. without causing distress. The same treatment was continued and a nurse was in attendance. The last three injections of sodium thiosulphate were given at home, as there was never any adverse reaction, and apparently some benefit.

From this time on, the patient was rational and composed, but still distressed by the burn, which was now exuding a large amount of liquid. She became quite weak and, on May 20, suffered more respiratory difficulty, from apparent filling up of the lungs, and expired at 3 A.M. the next morning.

Necropsy was denied and death was considered to be due to acute chemical nephritis, complicated by pulmonary edema and cardiac failure.

MacCallum describes the pathology of mercurial poisoning as an ulceration of the buccal and intestinal mucosae, the former of which may be accompanied by necrosis of the salivary glands and the jaw bone. The kidneys show necrosis of the epithelium of the convoluted tubules, accompanied quite often by a deposition of calcium phos-

phate. The injury is usually limited to the tubules but, in cases of longer standing, degeneration of the glomeruli, followed by fibrosis, results.

DISCUSSION

This case is of interest because of the extensive use of the injection treatment of varicosities at the present time, and because of the extreme rarity of fatal results. It is no indictment of the treatment, but should cause us to use greater care in the selection of patients and of safe chemicals.

The patient's age and physique lead one to believe that a chronic, degenerative process may have been present in the kidney before the treatment was begun. It might be best to limit the treatment to fairly robust individuals, not past the age of 50. In some cases it would be well to do renal function tests before the injection of sclerosing chemicals. In any case, physical examination and laboratory tests must be done with care.

With a chemical such as mercury, cumulative effect must be considered, because elimination no doubt varies a great deal in different individuals. Almost two months' time elapsed in this case between the last mercurial series and the fatal injection, but this was apparently not long enough.

One has also to consider, in dealing with irritant chemicals, the effect of repeated insults to the kidneys and other organs. One or two injections may do no apparent harm; while the summation of the effect of many treatments may be extensive damage.

The choice of a safe sclerosing agent would seem very important. Comparatively innocuous substances, such as dextrose¹⁹, Pregl's solution²⁰ and sodium chloride²¹, have caused embolism.

Overdosage must be avoided. Sicard warns against injections in excess of 10 cc. of sodium salicylate solution, and Linsler against the same amount of sodium chloride. Genevriar and Douthwaite both advise limitation of quinine and urethane to 2 cc. Sodium salicylate, up to 5 cc. of a 20- to 40-percent solution, is probably one of the best for routine use. Unless the solution can be prepared under perfect control, in a good laboratory, properly prepared ampules are, no doubt, the safest and best means of supply.

This paper is submitted, not as a deterrent to this form of treatment, but that the risks may be more accurately evaluated and the

sclerosing agent chosen with greater care. It is hoped that the good results so widely reported with this valuable form of treatment in the recent past may continue in the future.

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- 23.—Pregl's solution (sodium salt of hydriodic and iodic acids, with metallic iodine, 0.04 percent).
- 24.—Sodium chloride, 20 percent, 2 cc., recommended by Linser.

Hand Sterilization*

BY GEORGE W. COOPER, B.S., A.M., M.D., Baltimore, Md.

MANY different methods of sterilizing the operator's hands have been found efficient for major surgical procedures.

The following accredited method is the standardized routine for pre-operative preparation of the surgeon's hands at the Brady Urological Institute, Johns Hopkins Hospital:

- 1.—Wash the hands and arms thoroughly with corn meal and green soap: Rinse thoroughly.
- 2.—Scrub both hands and arms, 2 inches above the elbow, with a brush and green soap, for 3 minutes: Rinse thoroughly: Discard the brush.
- 3.—Clean the nails with orangewood sticks.
- 4.—With second brush, scrub for 5 more minutes.
- 5.—Clean up with alcohol, 70 percent, for 3 minutes.

This method, while an accepted procedure and proven efficient at Dr. Young's Clinic, as well as at other institutions, by clinical and bacteriologic studies, is quite time-consuming and even a bit tedious. Nevertheless, the method appears satisfactory and we have found, as other workers have experienced, that cultural studies of the method are practically consistently negative, if the "clean-up" is fol-

lowed through according to the above directions.

The tedium of the method must always be ignored, in major as well as minor surgical procedures, especially in teaching institutions. Theoretically, of course, the time-consuming factor of the "scrub-up" method should likewise be ignored in minor surgical and cystoscopic procedures, as well as in those of the field of greater surgery.

The practice of urology and certain other specialties, as is well known, brings forward the demands of certain phases of time and circumstances. Small, at best, is the number of cystoscopic examinations that can be done in one-sixth or one-eighth of a surgeon's working day.

There is difference of opinion, therefore, as to the practical application of the principle of finality in sterilization of the hands of the cystoscopist. Thus there are many and diverse plans for rapid sterilization in vogue at the various clinics and private offices of physicians. Some of these methods are indifferent, and likewise untested by those employing them, but most of them gaining recent usage are of approximately equivalent value.

The method here given has now been employed in the cystoscopic examination rooms of Brady Urological Institute for a period of 14 years. It is periodically checked by bacteriologic studies and by

*From the Brady Urological Institute, Johns Hopkins Hospital.

different observers, so as to cross-check the findings. In this way a large series of cultures of the hands of the cystoscopists has been recorded. Cultures have been taken, in various series of these studies, during the progress of the cystoscopy, just before, and also immediately following the examination.

This method, giving close approach to a consistently negative cultural check-up, is recommended for use and appraisal. In the consideration of various methods, it has been found comparatively efficient and economical. Its great simplicity likewise recommends it. It can be as rapidly executed as any having a rational margin of safety and embodies the following:

- 1.—Scrub the hands and arms, to the elbows, with a sterile brush and green soap, for one minute. Lay aside the brush and rinse the hands in water.

- 2.—Clean under the closely-clipped nails with an orange-wood stick. Rinse the hands in water.

- 3.—Scrub the hands and arms, to the elbows, with the same sterile brush and green soap, for 1 minute. Rinse the hands in water.

- 4.—Immerse the hands in a jar of 70 percent ethyl alcohol, rubbing them well together and rubbing the alcohol up to both elbows. The ethyl alcohol contains only methylene blue dye as a colorative, about 0.25 cc. to 1,000 cc. of alcohol.

RECENT CULTURAL STUDY OF THE RAPID METHOD

Both hands of five cystoscopists were cultured in 100 cases. In each case a plain agar and an infusion-dextrose-peptone broth culture medium were inoculated. These inoculations from the hands were made, in about equal numbers: (1) Immediately after the alcohol wash and before cystoscopy, the hands first being cleared of the alcohol film by rinsing in sterile water; (2) during the process of cystoscopy and without the sterile water rinsing, since the alcohol had supposedly evaporated; (3) immediately following withdrawal of the cystoscope and without water rinsing.

A cotton swab was inserted through the center of the tube plug of each dextrose-broth tube of medium and sterilized in situ. This swab was moistened in the

dextrose broth, applied to the dorsum and ventrum of all fingers and to the anterior and posterior margins of each nail and then inoculated to the surface of a plain agar slant. A plain infusion broth was also inoculated, on the following day, in the cases of cultures of cases Nos. 1 and 2—the only ones showing growth in a series of inoculations from 100 cases. A total of 202 inoculations were made in the study of 100 cystoscopic examinations. All 6 cultures of cases 1 and 2 showed growth.

All cultures of case No. 1 showed a mixed infection of *Staphylococcus aureus* (Rosenbach) and *Bacillus subtilis* (Cohn). This was undoubtedly a case of failure in sterilization technic. Investigation revealed that the operator's scrub-up time in this case was under 1 minute.

All cultures of case No. 2 showed a retarded growth of *Staphylococcus albus*. But one colony resulted on plain agar. Both fluid cultures showed slight or retarded growth.

CONCLUSIONS

- 1.—Of 202 cultural inoculations, from both hands of five cystoscopists (before, during and following the procedure of cystoscopy), positive cultures were obtained in only two of 100 cystoscopic examinations.

- 2.—One of these two cases showed but one colony of *Staphylococcus albus* (Rosenbach) after 72 hours of growth on plain agar, at 37°C. The dextrose and plain broths also showed retarded growth. Because the organism was *Staphylococcus albus*, and but one colony resulted, this case was discounted. It was considered an "extraneous", or organism incident to technic, rather than a true infective agent from the hands of the cystoscopist. Investigation of the second positive culture showed the cystoscopist to be at fault in not scrubbing so long as the prescribed two-minute period.

- 3.—Since the operator's nails have already been clipped and cleansed of gross depositions, in most cases, the second step in the rapid method described is usually dispensed with. In actual practice, then, there was usually merely a two-minute scrubbing with green soap, followed by the immersion in alcohol.

THE SEMINAR

CONDUCTED BY

MAX THOREK, M.D. (Surgery)

GEORGE B. LAKE, M.D. (Medicine)

[Note: Our readers are cordially invited to submit fully worked up problems to the *Seminar* and to take part in the discussion of any or all problems submitted.

Discussions should reach this office not later than the 1st of the month following the appearance of the problem.

Address all communications intended for this department to *The Seminar*, care CLINICAL MEDICINE AND SURGERY, North Chicago, Ill.]

PROBLEM NO. 3 (MEDICAL)

Submitted by Dr. Geo. Acheson,
St. Martins, N.B., Can.

Recapitulation: The patient is a man of 70 years, now 14 pounds under usual weight. His mother and one of her brothers died, late in life, from cancer of the stomach. The patient's past medical history is not significant.

Present Illness: About one year ago, the patient noticed shortness of breath and easy fatigability. The dyspnea, lassitude, weakness and dulling of the mental faculties have slowly but steadily increased. He is decidedly pale and sallow.

Digestive System: Throat and mouth, normal, appetite, fair; digestion, good; bowels fairly regular and stools normal; achylia gastrica present; much flatulence.

Blood Examination: Wassermann test, negative; hemoglobin, 60 percent; erythrocytes, 3,800,000 with a few macrocytes, microcytes and normoblasts; leukocytes, 5,000 to 7,000, with 45 percent polymorphonuclears and 52 percent lymphocytes.

Other findings those to be expected in a much weakened man of 70 years.

Requirements: Diagnosis, prognosis and treatment.

DISCUSSION BY DR. S. H. McDONALD,
St. John, N.B., Can.

The patient described in this problem (Dr. George Acheson) came under my care in the summer of 1929, with his chief symptoms pointing to the heart—a fairly clear picture of acute myocarditis.

His symptoms—dyspnea and marked loss of weight and strength—grew worse and his appearance was markedly cachectic: In fact, he had the appearance of a patient with a malignant condition.

I sent him to the hospital, where a series of laboratory studies revealed a blood picture suggesting pernicious anemia, but not entirely characteristic for that disease. I felt justified, however, in putting him to bed and giving him a liver diet, which had a good effect in raising the percentage of hemoglobin in the blood, but did not increase the number of erythrocytes, even with the addition of colloidal iron and arsenic.

The conditions grew slowly worse in spite of the treatment, and the Doctor decided to go to his old home in Kingston, Ont., which he did, dying there in November, 1929.

I had the impression, all along, that there was a malignant tumor somewhere, but this, neither I nor the consultants who saw the patient, were able to prove. I heard, indirectly, that the physicians at his home did not consider the case to be one of pernicious anemia.

DISCUSSION BY DR. GEO. B. LAKE, CHICAGO

The case was that of Dr. Acheson himself, and the prognosis is settled by the fact that a fatal termination occurred on November 26, 1929, as announced in the April, 1930, issue of CLIN. MED. AND SURG., page 326.

The differential diagnosis would appear to be between pernicious anemia and carcinoma of the stomach.

The blood picture is rather striking but, upon study, appears to be that of a severe, secondary, rather than a primary anemia, as the color index is below 1 and the percentage of abnormal erythrocytes is not great.

The achylia gastrica would fit into either picture; but the stomatitis and neurologic manifestations of pernicious anemia are missing. So, also, however, are the epigastric pain and vomiting which usually accompany gastric carcinoma.

On the whole, the diagnosis of cancer of the stomach seems warranted (although several of the usual symptoms are absent and others not reported), on the following basis:

1.—History of carcinoma in the family, developing at about the age attained by the patient.

2.—Symptoms coming on insidiously, without previous gastrointestinal disturbances.

3.—Rather rapid and progressive loss of weight and strength, with the development of "sallow pallor," which, if we had seen the patient, might have been recognizable as the typical cancer cachexia, as reported by Dr. McDonald.

4.—Achyilia gastrica and flatulence.

5.—The blood picture of a severe, secondary anemia.

6.—A fatal termination within less than two years of the onset.

It seems entirely probable that, in studying his own case, a physician might, subconsciously, refuse to admit the possibility of cancer and make studies along that line. Dr. Acheson had the impression, at the time this problem was submitted, that his case was one of pernicious anemia.

PROBLEM NO. 5 (MEDICAL)

SUBMITTED BY DR. A. S. DUNTON,
PARIS, ONT., CAN.

The patient is a draftsman, age 20.

History: A brother, 15 years of age, had rheumatic fever during last winter; recovery good. The patient had scarlet fever 10 years ago, followed by diphtheria; recovery good; never showed albuminuria or any heart lesion. Tonsillectomy was done some years ago.

Present Illness: For the past few weeks the patient had not been feeling well and

had noticed that his eyes were puffy at times, but never had any swelling elsewhere. His vision had been blurred for some time, but he attributed that to his work. For the past week he has had violent headaches in the frontal and occipital regions, becoming worse at night. In the morning they are slight. Has also complained of a nycturia, once or twice for the last 10 days. The urine has been cloudy, with some sediment and, on one or two occasions, has contained visible blood. His family has noticed that his color has been pasty for the last few weeks. At times he has complained of dizzy spells.

Physical Examination: A young adult male about 20 years of age, emaciated and of a sallow, pasty complexion.

Head: Ears, throat and nose negative; tonsils have been enucleated and there are no remaining tags; teeth are all good and gums in a healthy condition.

Chest: Negative. No rales at bases.

Abdomen: Negative; except for some tenderness on deep pressure in the right costovertebral angle.

Skin: Dry and hard to the touch; no edema in any area.

Eyes: Vision is much blurred. Both retinas show small hemorrhages and the discs are choked.

Heart: Some enlargement to the left. There are no murmurs, but the sounds are full and bounding. Pulsations can be seen over the entire precordium and in the vessels of the neck.

Extremities: Negative for edema.

Blood pressure: Systolic, 220; diastolic, 170; **temperature**, 99.2°F.; **pulse**, 82; **respiration**, 16.

Laboratory Findings: **Urine:** Color, red, cloudy; sp. grav., 1021; albumin, 75 per cent (by volume); sugar, negative; **microscopic examination**, blood cells very numerous, with an occasional cast; day quantity, 24 to 60 oz. (750 to 1,900 cc.); night quantity, 30 to 60 oz. (950 to 1,900 cc.).

Blood examination: Erythrocytes, 2,600,000; leukocytes, 8,000; hemoglobin, 60 per cent; non-protein nitrogen 45 mgm.

X-ray picture of the teeth showed no apical abscess.

For three weeks, the patient's urine was red and opaque, after which the blood cleared up and, since that time, he has passed no blood. The sp. grav. remained

(Continued on page 371.)

THE CLINIC

GYNECOLOGY

Carcinoma and Ovarian Cyst

By J. L. PRITCHARD, M.D., San Jose, Calif.

CASE 1.—Mrs. A. S.; age 45; married; white; hotel proprietor. I first visited her, March 2, 1929.

Complaint: Weakness and pain in the chest since September, 1928; a "lump" in the right breast, painful to pressure; enlarged glands in the right axilla.

Present Illness: About fifteen months previous to the first consultation she noticed a lump in the right breast. She had a sharp pain in the right hip in September, 1928, and took ultraviolet and electric treatments. She was treated by a chiropractor in December, 1928, after which pain in the back developed.

Past History: Family history, negative. She was always well and active. Some years ago she took rolling exercises for obesity, and bruised her right breast. She had been married 25 years and was never pregnant. Her menses are normal.

Physical Examination: The patient is able to be up, but prefers to be in bed. Her general condition is fair; heart, lungs and extremities negative.

There is a tumor in the right, upper quadrant of the right breast, about 3.5 cm. in diameter, freely movable, and attached to the skin; also a mass 3 cm. in diameter in the right axilla. There is tenderness over the mid-dorsal spine; no edema; appetite fair.

Urine: Specific gravity 1,026; albumin, faint trace.

Blood: Hemoglobin, 57 percent; red blood cells, 3,790,000; leukocytes, 10,700; polymorphonuclears, 91 percent; small lymphocytes, 3 percent; large lymphocytes, 6 percent.

Wassermann Test: Negative.

She was admitted to the O'Connor Sanitarium, March 5, 1929, and discharged March 12, 1929.

X-ray Examination, March 5, 1929. Antero-posterior and oblique view of dorsal vertebrae.

There is evidence of an extensive caries of the body of the 6th dorsal vertebra, with absorption and compression of the bone. The body of the 7th dorsal vertebra is also involved in the pathologic process, as evidenced by the lateral compression of its right side.

There is a certain degree of kyphosis present and a slight anterior displacement of the vertebral column above the lesion.

On account of the extensive bone involvement, an operation was not deemed advisable. On March 12, 1929, she was discharged from the hospital and returned to her home, where her general condition became gradually worse, but she had remarkably little pain. From 1/2 to 1 tablet of Pantopon, by mouth, would give her a night's rest and she took nothing during the day.

On April 29, 1929, she was returned to the hospital for an x-ray report.

Findings: Right hip and pelvis show extensive carcinomatous invasion of the upper end of the right femur and the os innominatum. Dorsal and lumbar vertebrae and ribs show multiple carcinomatous foci in the bodies of the 7th and 8th dorsal vertebrae, with a great deal of compression deformity from bone destruction. Multiple foci are present in the ribs, showing beginning and advanced stages of destruction. The left scapula also shows metastatic foci. The first and fourth lumbar vertebrae show def-

inite involvement of the transverse processes. Other vertebrae of the spinal column show extensive lesser multiple areas of involvement.

The patient's appetite failed steadily. First she refused solid food, then liquids, even orange juice. Her bowels did not move during the last five weeks. She complained very little. Some nights she would take only $\frac{1}{2}$ of a Pantopon tablet. She never complained of pain in the breast, nor in the axilla. There was no sloughing around the primary focus, nor elsewhere.

Death occurred July 5, 1929. An autopsy was not done.

COMMENTS

1.—This patient might have been operated upon when I first saw her, early in March, 1929. The operation would not have relieved her in the least. It probably would have caused her more suffering.

2.—It is well to take an x-ray picture in cancer cases, to determine whether there are bone metastases.

3.—The lack of pain in this instance was remarkable.

Case 2.—Mrs. S. C.; age 58; admitted to O'Connor Sanitarium Jan. 4, 1929; discharged Jan. 28, 1929.

Complaint: Bleeding from the vagina for one month; a feeling of weight in the lower abdomen; some pain.

Present Illness: Symptoms began one month ago.

Past History: Always well; one child living and well; none dead.

Urine: Yellow; clear; acid; sp. grav. 1.018; albumin and sugar, negative; occasional pus cell; no blood nor casts.

Blood: Leukocytes, 10,100; red cells, not counted; neutrophils, 54 percent; small lymphocytes, 4 percent; large lymphos., 27 percent; transitionals, 6 percent; large monos., 9 percent.

Preoperative Diagnosis: Lump in the lower abdomen, movable. Fibroid tumor of the uterus.

Pathologist's Report: Fallopian tubes, tortuous; uterus, 1 subserous fibroid, diameter 1.5 cm. *Diagnosis:* Chronic, hypertrophic endometritis; fibroma of uterus.

Microscopic Report: Chronic, hypertrophic endometritis.

I am reporting this case through the courtesy of the doctor who attended the patient. I was called to assist at the operation, not having seen the patient before, and not hav-

ing made any examination previous to the operation. She was under the anesthetic when I first saw her.

A midline incision was made. The uterus was large, soft, boggy, and somewhat bluish in color. While the hysterectomy was being done and pressure being exerted on the uterus by the Summers clamp, a mass was forced through the cervix. After that the uterus was very flabby. The uterus was removed, leaving the cervix. No glands were noted.

Before the patient left the table, I asked permission of the doctor to make a vaginal examination. Upon inserting the speculum it was observed that the upper part of the vagina was closed. There was a very small opening, but nothing coming through. This small opening was enlarged and a mass of blood clots found in the upper vagina. It was not possible to get a good look at the cervix with the light available, but by palpation it felt ulcerated. A gauze pack was put in the vagina.

I heard nothing further of the patient for 2 or 3 months. Then the doctor told me that she had an incisional hernia and was going to the County Hospital, as she had not paid the hospital bill for the previous operation.

The following is from the County Hospital record:

Complaint: Pain in abdomen; hernia in upper part of abdominal incision; some vaginal bleeding, off and on, with purulent discharge.

Physical Examination: Blood pressure, 160/100; arteries, soft; teeth, poor; heart, lungs and extremities, negative; medium-sized incisional hernia below umbilicus, with mass protruding.

Pelvic Examination: Small amount of hemorrhage; vaginal walls contracted down to reddened area, over which could be seen the end of a retracted cervix. There is a thick, purulent, bloody, foul discharge.

On rectal examination a hard mass is felt in the region of the cervix, extending outward to the pelvic walls.

Urine: Sp. grav. 1.020; albumin, 2 plus; few white and red blood cells.

Blood: Leukocytes, 8,400; lymphocytes 26 percent; neutrophils, 75 percent; hemoglobin, 75 percent.

Preoperative Diagnosis: (1) Incisional hernia; (2) Recurrent pelvic malignant disease.

Surgeon's Report: Laparotomy, median incision. There is an irregular, nodular mass, the size of an orange, behind the bladder, with the rectum penetrating it—very dense and shading into the parietal peritoneum. Attempts to dissect it out resulted in perforation of the bowel, so only a section was removed for diagnosis.

Pathologist's Report: Metastatic adenocarcinoma.

COMMENTS

This case is interesting and instructive.

1.—The doctor made a vaginal examination but did not make a correct diagnosis. He told me there was no sign of a cervix. It was unusual to look in and not see a cervix. It might have been confused with an amputated cervix, but there had been no previous operation.

2.—The pathologist did not make a diagnosis of malignant disease in the uterus, though there must have been some invasion. Perhaps he could find it now.

3.—Anyone called to assist at an operation would feel better if he had had a chance to examine the patient previously.

4.—This woman did not receive the proper treatment.

Case 3.—Miss J. S.; age 25; single; teacher; first seen, March 17, 1929.

Complaint: Abdominal pain and nausea.

Temperature: 102°F.; **pulse,** 120.

Urine: Negative.

Blood: White blood cells, 16,000; neutrophils, 75 percent; small lymphocytes, 15 percent; large lymphos., 8 percent; transitionals, 2 percent.

An ice bag was placed on the abdomen and she improved. On March 19, 1929, there was still some pain. A second blood count was taken at that time: White cells, 9,200; neutrophils, 73 percent; small lymphos., 16 percent; large lymphos., 6 percent; transitionals, 4 percent; eosinophiles, 1 percent.

Two or three days later she was as well as ever.

On May 10, 1929, she was taken rather suddenly ill, with abdominal distress, nausea, weakness and, later, severe pain in the lower abdomen. An ice bag and an analgesic relieved the pain somewhat. On May 11, 1929, I saw her and sent her to the hospital. The pain was quite severe.

Past History: Usually quite well, except for dysmenorrhea. Never robust—a thin, wiry type.

Family History: Father living and well; mother died suddenly of "heart trouble"; brother died of tuberculosis; two sisters living and well.

Physical Examination: Tonsils enlarged and red, later became spotted (follicular tonsillitis); very tender over the lower abdomen; muscles spastic; heart lungs and extremities, negative.

Urine: Specific gravity, 1.028; albumin, very faint trace; pus, 3 plus; no blood nor casts.

Blood: Red count not taken; white cells, 18,300; neutrophils, 86 percent; small lymphos., 6 percent; large lymphos., 7 percent; transitionals, 1 percent.

Progress: Her temperature went to 105°F., and gradually came down to normal on the 4th day. The throat was quite sore; the cervical glands were enlarged and tender; the tonsils were spotted (no previous tonsillitis).

While the onset showed abdominal symptoms, the tonsillitis soon overshadowed that and caused us to postpone the operation, although the abdominal symptoms were alarming. It looked as though we might have a ruptured appendix at any time. By May 14 she was improved so much that we allowed her to return home.

The abdominal symptoms continued, but were not so marked. However, on May 17, 1929, she was returned to the hospital and operated upon on May 18; midline incision.

Operative Findings: The appendix was long and contained a large fecalith, but did not look bad. The right ovary was enlarged and contained two cysts, which had destroyed all ovarian tissue. The ovary was removed. There were several fibrous mesenteric glands, varying from 2 cm. to 4 cm. in diameter; none appeared caseous nor malignant and they were not removed.

The postoperative course caused us some uneasiness.

The temperature ranged as follows:

Third day: Highest temp. 101.0°; lowest, 98.6°F.

Fourth day: Highest temp. 106.6°; lowest, 98.6°F.

Fifth day: Highest temp. 101.2°; lowest, 98.°F.

Sixth day: Highest temp. 100.4°; lowest, 98.6°F.

Seventh day: Highest temp. 101.0°; lowest, 98.6°F.

Eighth day: Highest temp. 99.6°; lowest, 98.4°F.

Ninth day: Highest temp. 99.4°; lowest, 98.4°F.

Tenth day: Highest temp. 99.4°; lowest, 98.8°F.

Eleventh day: Highest temp. 101.0°; lowest, 98.0°F.

Twelfth day: Highest temp. 99.2°; lowest, 98.0°F.

There was no chill. The abdomen was tender and we thought of internal bleeding (later developments indicated that there was none). She left the hospital on the 12th day and, after a week of resting at home,

felt very well. After two weeks she left for her summer vacation, and the reports are that she is gaining steadily in weight, has a good appetite and feels entirely well.

Pathologist's Report: Ovarian tissue shows chronic oophoritis; appendix, no pathologic changes.

COMMENTS

The appendix was hardly the cause of the abdominal symptoms. The cystic ovary probably contributed to the dysmenorrhea. I feel that the mesenteric glands indicate what caused most of the abdominal trouble.

SEMINAR

(Continued from page 367)

fixed around 1,010 for most of the time, but now he can concentrate to 1,026. The urine, at the present time, shows a trace of albumin; no blood, microscopically; and occasional hyaline casts.

The blood pressure was constantly over 200 mm. of Hg. and as high as 260 mm.

for three weeks, and then dropped to 160 systolic and 110 diastolic, slowly.

Requirements: (1) Give diagnosis, prognosis and treatment. (2) If the patient recovers, how long should he be kept from work and what should be done about the hypertension?

THE PRACTICE OF MECHANICAL MEDICINE

The European people are getting better medical service than the people in America, and I believe it is due to the fact that we are depending too much on machinery and equipment.

With all the expensive accessories to make work easier, I think the doctors, in themselves, have not improved. Laboratory experiments have brought a greater knowledge of tissues and of disease and those facts are available to the physician, without any efforts on his part. Perhaps this is the very reason why his powers of observation are not so keen and his own resourcefulness is not better cultivated.

Our country is overcome by gigantism, and physicians cannot give the time they should to their patients. It is said that, in the new, big medical center of New York, doctors, clean shaven and well dressed, enter the hospital Monday morning full of spirits and jauntiness, ready to see their patients, and during the latter part of the week, having at last found them, they emerge with beards, haggard and worn out.—DR. G. F. CHANDLER, of Kingston, N. Y., in M. J. and Record, Jan. 1, 1930.

CLINICAL NOTES AND PRACTICAL SUGGESTIONS

A Health Week Program

I WISH to present a suggestion for a health week program in response to the invitation on page 7 of the January, 1930, issue of CLIN. MED. AND SURG.

Pamphlets for distribution at the meetings which I shall outline may be obtained gratis: "Let Your Doctor Decide," from the National Tuberculosis Association, 370 Seventh Ave., New York City; "See Your Doctor First," from Petrolagar Laboratories, Inc., Chicago; "Have a Health Examination on Your Birthday," from the National Health Council, 370 Seventh Ave., New York City. These people have other literature, also, which they will, no doubt, be glad to send. Write to them about it.

I propose a family health conference, organized and conducted by the local medical society, if there is one and, if not, by all of the doctors in the town, working in cooperation, and not as individuals. The individual work will come later.

I suggest the following announcement, to be used as a poster or as an advertisement in the local paper or both. If the editor is properly approached he should be willing to donate space, if that fact is stated at the bottom of the ad. Moreover, the Conference (that is an excellent word! —Ed.) will give him some good news stories.

FAMILY HEALTH CONFERENCE

WHAT IS IT?

The family health conference is a plan to interest people in health matters and race betterment.

WHAT FAMILIES ARE ELIGIBLE TO THIS CONFERENCE?

Any family in ordinary health may enter. No one obviously ill will be received for examination.

WHAT DOES THIS CONFERENCE OFFER?

This conference offers a thorough physical examination of every member of the family and a family pedigree that covers heredity and health history. This pedigree is a valuable family tree. The time has come when dates of births and deaths, recorded in the family Bible, are deemed an insufficient family history. Something more is required. The record of family traits and the families' score cards used in these examinations furnish the complete record desired.

WHY SHOULD SEEMINGLY HEALTHY FAMILIES COME FOR HEALTH EXAMINATIONS?

Many times, members of supposedly healthy families are afflicted by an obscure disease. At all examinations, indications of incipient tuberculosis, diabetes, heart troubles, spinal curvatures, and other serious conditions are discovered, often where the family least suspects them.

WHAT DOES THIS EXAMINATION INCLUDE?

The examination offered includes family and individual history; examination of eyes, ears, nose and throat; structural measurements and weight; general physical examination, including the heart, lungs, abdomen, extremities and blood pressure; and a laboratory test of the urine and blood. All the findings are recorded and a summary is made of the strong and weak points, with appropriate advice.

HOW CAN AN ENTRY IN THE FAMILY HEALTH CONFERENCE BE MADE?

Entry may be made by application to your family physician.

WHEN DO FAMILIES COME FOR EXAMINATION?

Appointment cards are given to all families making entry in the conference. These cards state the day and hour for examination, thus avoiding tedious waits.

I have prepared a tentative program for three days. This may be extended, along the same lines, if desired. Copies should be printed and distributed by mail, from drug stores or in any other effective manner.

PROGRAM

FIRST DAY

Morning

Examinations for FAMILY HEALTH CONFERENCE

Afternoon

HEALTH

- 1.—Brief Survey of Present Possibilities in Curative and Preventive Medicine.
(A talk by a physician).
- 2.—Staying Well, Rather Than Getting Well.
(A talk by a physician).
- 3.—Film on PERIODIC HEALTH EXAMINATION.
(Suggestion:—"Working for Dear Life".)

SECOND DAY

Morning

Examinations for FAMILY HEALTH CONFERENCE

RECREATION AND HEALTH

- 1.—Recreation: A Necessary Health Factor.
Stressing such points as:
 - (a) Daily Health Habits.
 - (b) Exercise and Recreation as adapted to the individual needs.
(A talk by a physician).
- 2.—Diet.
 - (a) An Adequate Diet.
 - (b) Proper Preparation of Food.
 - (c) Proper Serving of Food.
 - (d) Individual Diet Requirements.
(A talk by a physician or dietitian).
- 3.—A Film. (Say, on "CLEAN MILK.")

THIRD DAY

Morning

Examination for FAMILY HEALTH CONFERENCE

Afternoon

THE HOME IN ITS RELATION TO HEALTH

- 1.—Location; Building; Furnishings.
(A talk by a competent person from the Home Economics Department of the State University).
- 2.—Discussion.
- 3.—Presentation of the HEALTHIEST FAMILY.

I believe that if this scheme were put across with a little "snap" it would arouse much interest and go far toward educating the people to make their family physicians *conservers*, rather than merely *restorers* of health.

This drive could profitably be followed up by the individual use, by physicians, of the double-barreled direction slip, which I reported on page 302 of the April, 1930, CLIN. MED. AND SURG.

EDMUND LISSACK, M.D.

Concordia, Mo.

[This is fine stuff! We hope that our readers will take hold of this thing and do something with it. We shall be glad to hear from any others who have concrete and practical ideas, or to hear comments on Dr. Lissack's suggestions.—Ed.]

Early Diagnosis in Tuberculosis

RECOGNIZING that the arrest or cure of cases of tuberculosis depends largely upon diagnosing the condition at the earliest possible moment, the Chicago Tuberculosis Institute is launching a campaign to bring this matter forcibly before the public, by means of posters, window displays, advertisements in the newspapers, lectures, moving pictures, etc. Special stress is being laid, at this time, upon the recognition of tuberculosis in children.

Here is a splendid opportunity for up-and-coming medical societies, health officers and even individual physicians to do a valuable public service in their communities and, incidentally, obtain some worth-while publicity for the medical profession.

The Institute (address 360 N. Michigan Ave., Chicago) will furnish, free of charge, folders for personal distribution, posters, window displays and "stickers" to go on envelopes and will loan a 1,000 or 2,000 foot movie film to any responsible organization that will show it.

PROTECT

them from

Tuberculosis



**Keep them away
from sick people..
Insist on plenty of
rest.. Train them
in health habits..
Consult the doctor
regularly..**



In addition to this, they are willing to provide cuts of pictures or advertising matter (two samples are shown here, and there are a number of others) and articles of various lengths (in case some local physician does not care to write these himself). A personal conference with the editor of the local paper ought to enlist his cooperation in running this material, together with some sound and diplomatic advice regarding periodic health examinations, sponsored by the town or county medical society.

I suggest to the officers of medical organizations and to town and county health officers that they write at once to the Institute for particulars as to the help it will be glad to furnish, and then get behind this campaign and put it across with a bang. It will be good business for the public, for the medical profession and for individual physicians. The sooner we identify ourselves with the preservation of health, rather than



Sun and Air Continue Their Cure
During Out-Door Classes at a
Preventorium.

solely with the cure of disease, the better it will be for all of us.

GEO. B. LAKE, M.D.

Chicago.

Malpractice

IN PRACTICALLY every book of reported cases we find instances in which a physician, not understanding his rights in a certain matter, has violated well established legal principles, for which violation he has been held by the jury to respond in substantial damages.

It is the duty of the physician, and he impliedly contracts, to protect his patient in all reasonable ways from contagious and infectious diseases.

Upon dismissing his patients, the physician should carefully tell them what to avoid and advise them to exercise that care which, in his judgment, is best calculated to restore their natural health and strength.

A physician may be liable in damages for neglect or failure to instill or have instilled into the eyes of a newborn child a proper solution, as required by statute, if blindness or disease of the eyes results from such failure. (N.C.)

Leaving open a window during an operation, whereby insects get into the wound, authorizes a finding of negligence, in the absence of a reasonable explanation. (Miss.)

The patient's poor condition, combined with malpractice to produce the patient's

injuries and ailments, does not prevent the physician from being liable for the injurious consequences of his lack of skill or care. (Ala.)

If a physician, by sufficiently careful examination, could have discovered foreign particles in a wound, plaintiff could recover for damage resulting therefrom. (N.C.)

A physician cannot rely upon the diagnosis of another, no matter how skilled, in administering drugs containing poison, the patient being entitled to the judgment of his physician, formed from his own diagnosis. (Ala.)

Excessive delay in performing a necessary operation is culpable negligence, for injury from which a physician is liable. (Minn.)

Although the actual incision is made by one physician, the other is jointly liable if all the other acts in and about the operation were done by both jointly. (Ohio.)

A physician is liable for pain resulting from a failure to use skill, care and judgment, whether or not there is an ultimate cure. (N.Y.)

Where one physician retains complete control of the other, leaving to the other no discretion, but only the manual administration of the prescribed treatment, and renouncing no part of his functions as the sole physician in the case, the relation of principal and agent exists, making him liable for negligent treatment of the patient by the other physician. (Mo.)

It is the duty of a physician to act with the utmost good faith toward his patient, and if he knows that he cannot accomplish a cure, or that the treatment adopted will probably be of no benefit, it is his duty to advise his patient of these facts, and if he fails to do so he is guilty of a breach of duty.

HENRY E. SAMPSON,

General Counsel,

Professional Insurance Corp.

Des Moines, Ia.

Colloidal Mercury Injections

WHILE it seems best, in most cases, to inject colloidal mercury sulphide intravenously, there are certain cases in which intramuscular injections are more practicable.

Having heard some complaints to the effect that this preparation, when given

hypodermically or intramuscularly, stains the tissues, some comments on this point may be of interest.

I feel that hypodermic injections should not be used; but, with proper precautions, intramuscular injections can be given without this distressing result. My technic is as follows:

1.—The needle used should be not less than 1½ inches long, and should be plunged deep into the buttock.

2.—Before introducing the needle, the skin should be *pulled strongly to one side*, thus eliminating, when it returns to place, a direct line of injection.

3.—The fluid in the syringe should be overlaid by 1 cc. of air, which should be injected after it, thus clearing the needle and minimizing the danger of back-flow of the mercury solution.

With proper technic, this "seepage" becomes a very rare occurrence, but should it take place, it is absolutely painless and harmless and will, in time, be completely absorbed; but this, I admit, takes place very slowly. Meantime, as it is on the buttock, it is not socially conspicuous, being noticeable only in the privacy of the boudoir.

Since the publication of my article on this product (*C. M. and S.*, Aug., 1929, p. 538), my observations make me even more enthusiastic about it.

LEO C. DuBOIS, M.D.

Chicago, Ill.

The Crowd

YEARS ago, Gustave Le Bon wrote a small classic called "The Crowd," a study of the popular mind, in which he held that a crowd cannot be compared to the individuals that make it possible; that the mean average is probably of little value, as the new character of a crowd takes on new features and the new average is below that of the mean. One learns from Le Bon that a wide chasm may separate a great surgeon from an orderly, and yet, as to character, the more lowly one may be the better of the two; that men seem to take to the primitive, in the mass; and that crowds may be composed of units spread out over a wide territory, held together by a common emotion.

All this helps in trying to understand medical assemblages. Doctors, in their home environment, may be, individually, men of great judgment and keen to see the dangers

of the future. When brought together in the mass, however, they seem to take on rather childlike qualities, as may be seen by their restlessness, tendencies to run in and out, irritation over some mechanical error, and above all their opposition to an address pointing out to them the weaknesses in their nonprofessional outlook.

Under the spell of a celebrated speaker or a well-known personage, I can think of no audience more quickly led than a group of medical men. This was illustrated the other day at Detroit, when the powers of the Interstate Post-Graduate Assembly conferred on Henry Ford the honorary title of Doctor before an audience of nearly 5,000 physicians. The crowd went wild and clapped its hands and shouted in childish enthusiasm. Mr. Ford stood smiling, amidst a number of celebrated medical men, while Dr. Deaver, his picturesque personality all aglow, delivered the bestowal address. The industrialist said not a word, but bowed and retired from the scene, as a mighty roar of approval followed.

This idea is covered in Gustave Le Bon's book. Had any member, prominent or obscure, of that august gathering arisen and told this shouting crowd that they were about to award a great honor to one who had lately criticized their whole profession rather harshly, in a series of syndicated articles, written on decidedly slender knowledge; and that in Detroit he had built a hospital to controvert directly the medical profession's idea of how a hospital should be run; and that in the medical fraternity in his city there was more than one doctor who felt decidedly hostile to his attitude—that member would have been summarily dealt with.

Mr. Ford is a great inventor who made a good car that has carried many a doctor efficiently to his destination. I doubt if Mr. Ford ever constructed his car as a benevolent gesture. But I should like to ask if Behring would not have been a millionaire if he had patented diphtheria serum. Would not Roentgen have been more of a Croesus than Ford if he had received \$20 on all x-ray outfits and a royalty on the plates? Where would the man be who invented the vaginal speculum, if he had patented it? What about Banting and a cent on every unit of insulin? Any one of these men could be where Ford is if he had said he chose to run that way. Always we overlook our own great dis-

coveries.—DR. HARRY M. HALL, Wheeling, W. Va., in A.M.A. Bul., Dec., 1929.

The Physician's Salary*

THE professional man can put his business and personal expenditures on a sound budget basis by first ascertaining the following facts:

- 1.—What was the gross income?
- 2.—What amount was used for office expenses?
 - A.—Rent.
 - B.—Light, gas and heat.
 - C.—Replacement of broken instruments.
 - D.—Repairs on equipment.
 - E.—Depreciation.
 - F.—Office assistant's salary:
 - Secretary.
 - Nurse.
 - G.—Materials, etc.
- 3.—If a physician, what amount of automobile expense should be charged to maintenance of practice?
- 4.—What was the net income for the year after deducting all business expenses?
- 5.—Can, or did I live on this amount?
- 6.—How much did I save of this income? (In cash or marketable securities).
- 7.—What amount of the net income was invested in life insurance.

If the net income is then divided by 12, it will give us a certain average net income per month. Each year of practice should find the professional man busier than he was the year before, that is, providing he keeps abreast of the later methods and does not suffer ill health. If this is true, then the net income per month should continue growing larger from a yearly average, until the period of diminishing physical effort is reached. This age limit, when such a period may be reached may, of course, vary, but 55 may be considered a fair average.

Logically it follows that the doctor at the outset of his plan, can pay himself a salary every month, during the year selected, based upon his net monthly income of the year previous. The year following, he can raise his salary a certain definite amount, based upon the present year's business. Careful business records must be kept, the will power to stick to

*From *Magazine of Wall Street*.

the plan adopted, the determination to live within the salary allotted, and the reward will indeed be great.

GAYLORD J. JAMES.

Therapeutic Separation

THE case reported by Dr. Shafter (CLIN. MED. AND SURG., Mar., 1930, p. 220) presents, as the editor says in his comments upon it, one of the most difficult problems we have to solve.

The editorial suggestion of a separation for one or several months is, in my opinion, the most rational solution. This would give the wife and mother a chance to rest and recuperate and have the endometritis from which she suffers treated, with some prospect of a cure.

The "gorilla," too, might get his eyes opened to the value of a loving and solicitous wife; or, on the other hand, his conduct might be so outrageous as to make a permanent separation easier. There are men who seem to be a cross between a monkey and a jackass, with whom either of those self-respecting beasts would hesitate to claim kinship.

If this husband has any humanity about him, he will cooperate with the doctor and give him an opportunity to restore this woman to a reasonably normal condition.

J. R. SMITH, M.D.,

Warsaw, Mo.

Economic Problems in Medicine*

LESS than ten percent of the patients seen by a general practitioner need hospital treatment, but many are hospitalized by specialists who are called in consultation.

The art of medicine has been illogically subordinated to its scientific aspects, and a number of conditions have arisen which have increased the cost of medical care unnecessarily. Here are some of them.

1.—*The traditional taboo upon the discussion of the business side of medicine and an undue fear of considering questions of medical economics.*

Instruction in the business of medicine should have been given in the medical schools and developed from the start. No subject is now too sacred for free dis-

cussion and, if a physician is afraid to think and talk about this aspect of his work, something is wrong and needs correction.

As matters stand, in most cases, a patient does not know what the medical services he seeks will cost him, and the physician does not know whether the patient can pay. These matters should be discussed freely at the first consultation.

2.—*Traditional fixed fees for certain services.*

The idea that the fixed fee for a house call should be three or five dollars (or any other definite sum) and that an appendectomy should cost \$200 (for example) is ridiculous. One call may take an hour of a busy doctor's time, and another only ten minutes; one appendectomy may be done in fifteen minutes, as an incident of a morning's routine, and another may require two hours in the middle of the night.

Fees should be individualized on the basis of: (a) The qualifications of the physician—an expert should receive more than does a tyro; (b) the actual service rendered, including the time spent; (c) the patient's financial status.

3.—*The lack of adequate and economic nursing.*

Full-time nursing in the home and special nurses in the hospital are rarely needed; but physicians and patients seem unable to cooperate in utilizing the highly satisfactory scheme of hourly nursing. This plan must be organized and developed in a large way, if the cost of medical care is to be satisfactorily reduced.

4.—*Inconsiderate Hospitalization.*

Treating a patient in a hospital is fine for the attending physician and for wealthy patients, but it is decidedly tough on those who cannot afford to pay large hospital bills. Sanitariums, too, are cluttered up with patients who ought never to have been sent there.

It would surprise some of the younger doctors if they could realize how much can be done for a patient in the office or in his home, provided the physician is not too lazy or careless or both to do the work and save the patient unnecessary expense. Many of the simpler routine laboratory examinations—blood, urine, etc.—can and should be done in the physician's office, as part of the service for which a fee is charged.

5.—*Unnecessary consultations by specialists.*

The general practitioner filled the fore-

*Abstract (by G.B.L.) of a paper read before the Congress on Medical Education and Hospitals at Chicago, Feb. 18, 1930.

ground of the medical picture a generation or two ago. It is not so now. He is rather looked down upon and the specialist has come to the front. That is why the younger men are not eager to become general practitioners; and that is one of the chief causes of the high cost of medical service.

Experts are important in our scheme of things and are frequently urgently needed; but their services are called for in many cases which should be handled by a really able general practitioner—which is the only kind tolerable today—men who are competent and honest and can really take care of those who are ill.

The modern practitioner must and will keep abreast of progress in his profession by the regular, systematic study of books and periodicals. He will attend medical society meetings, where he will keep silent until he really has something to say.

Group clinics have their place in the modern scheme of things, but they will never replace the general practitioner who can and will treat 80 percent or more of his patients in the office or the home, and keep the hospitals clear to perform those services which they, alone, can render.

ARTHUR T. HOLBROOK, M.D.
Milwaukee, Wis.

Acute Gastroenteritis (Cholera Morbus)

SO FAR as my experience goes, the best treatment for cholera morbus, and the only one worth considering in severe cases, except for very rare contraindications, is a hypodermic injection of morphine, 1/4 grain (16 mgm.) and atropine 1/150 grain (0.4 mgm.), given, preferably, just as soon as the intestinal canal has been thoroughly evacuated, which is as early as the doctor usually sees the case. In the majority of cases this is the only medication required and the patient recovers speedily without any other treatment. Should further treatment be required, however, the system is now in a condition to receive it, and whatever remedy is put into the stomach will be retained and absorbed.

I learned this treatment in the summer of 1882, while in the midst of a local epidemic of cholera morbus, during which I treated more severe cases than I had ever seen before and, it seems to me, than I have seen since. I had tried the usual remedies by

the mouth, but they were promptly rejected. Then I made use of the rectal method, but found this to be only a little less unsatisfactory than the other. Finally I turned to the hypodermic method of treatment, which was not so commonly used then as now, and here I found the problem solved. The dread disease was now under my control. The remedy did far more than I could have expected. I have used it in all stages of the disease, from the first attack coming like a shock, before either vomiting or purging had occurred, to the cases which had been dawdling along for a week or more, and found the results good, though perhaps not equally good, in all of them. I never had any bad results, though there may be some rare cases, where opium in any form is unsafe, in which it is permissible to putter along with placebos. But I do not like to treat cholera morbus with placebos.

There may be better methods known to the up-to-date young practitioner, but I am satisfied with this old-time remedy.

J. M. FRENCH, M.D.,
Milford, Mass.

A Hint in Urinalysis

FOR a good many years I have been annoyed by the test tube "explosions" in the process of urinalysis, when subjecting the tube to heat. Frequently, just before the boiling point is reached, "explosions" occur, causing the contents of the tube to be ejected against the walls and sometimes as high as the ceiling, resulting in ugly stains, especially when colorful reagents are used. This can be prevented by placing an ordinary wooden applicator in the tube, which may then be subjected to any degree of heat without resulting "explosions."

A. W. DUMAS, M.D.
Natchez, Miss.

A Treatment for Infected Wounds

POSSIBLY one of the commonest affections with which the general practitioner comes in contact is the infected wound. This means, usually, the insignificant wound or abrasion, which has been forgotten until the appearance of the characteristic symptoms of infection—pain, redness and swelling, tenseness and boggy of the tissues, and often red streaks extending upward along the lymphatic channels, with tenderness of the adjacent lymphatic glands. Thus

we have the development of a spreading cellulitis—a rapidly extending inflammatory process in the subcutaneous cellular tissues, and often extending much deeper.

The usual treatment of this condition is to make numerous incisions into the affected area, and apply frequent, hot fomentations.

A person familiar with the pathologic processes in the tissues involved would infer that the hot fomentations would, not only lower the vitality of the tissues when first applied, but that the succeeding warmth of the application would assist, instead of retard, the growth of the microorganisms concerned.

However, in time, the inflammation subsides, and the wounds granulate; but in some cases there is sloughing of the deep structures. The final result, if a limb be affected, is a scarred member with limited movement.

In the majority of cases of local infection (one might almost say in all cases) the spread of the infection can be wholly arrested. Early treatment, if instituted as here outlined, will cause a complete dissipation of all symptoms and physical signs in from 48 to 72 hours. If the treatment has been begun late, and pus has formed, this pus will be found to be localized at the site of the original injury, and can be readily evacuated. No incisions are necessary, as a rule, and there is little or no limitation of movement as an end result.

This method of treating an infection is to apply, continuously, a cold, wet, astringent and evaporating lotion, as a dressing.

The formula is:

R Plumbi Acetat. 3 iv 16.0

Alcohol Denat. 3 iv 120.0

Aq. Dest. q.s. ad. 3 xvi 500.0

M. et ft. lotio.

Sig.: Poison! Use as directed, externally.

The lotion must be kept cool, shaken before use, and employed to keep the dressings saturated. Cilkloid will assist in keeping the gauze moist. The alcohol must be the cheap, denatured form.

Some pharmacists will protest, and claim

that this solution is poisonous and should not be applied, on account of the danger of absorption. No case of such poisoning has been met with, though the lotion has been in constant use for the last twenty-two years.

Prior to Prohibition, the alcohol used in making this lotion was the commercial methylated spirits. As this is not available now, denatured alcohol gives the best results. Rubbing alcohol, or grain alcohol that has been denatured, is of no utility.

The same lotion, similarly applied, will be found to be most efficacious in arresting the spread of an erysipelatous cellulitis.

R. STEWART MACARTHUR, M.D.

Los Angeles, Cal.

Obstetric Teaching and Skill*

IF A physician expects to specialize in surgery or internal medicine, he plans to spend several years in the large clinics studying cases. The surgeon feels that he should operate *every day*, to "keep his hand in."

Not so in obstetrics! Many a man enters the practice of medicine without ever having seen (much less done) a difficult forceps operation. The result is that he gets into trouble and turns to cesarean section to get out of it, thus subjecting the patient to a dangerous and frequently unnecessary operation.

Eighty percent of all deliveries are normal and take place spontaneously; but a case of dystocia which will tax the resources of the ablest accoucheur may appear, without warning, at any moment.

No man is fit for the practice of obstetrics who has not attended, in full, at least 75 deliveries before he receives his license.

FRANK W. LYNCH, M.D.,
Prof. Obst. and Gyn., Univ.
of Cal. Med. Sch.

San Francisco, Calif.

*Notes (by G. B. L.) from a lecture before the Congress on Medical Education and Hospitals, at Chicago, Feb. 19, 1930.

THE LEISURE HOUR

May Evening, After Rain

After a sullen day of warm spring rain
The storm-clouds parted as the sun sank low.
A stirring scent rose from the sodden grass,
Bathed in the wonder of the afterglow.

The slim, bright sickle of the crescent moon
Swung down the West among the thinning wrack.
The sleepy bed-song of the daytime birds
Was answered when two whip-poor-wills called back.

And all the poignant beauty of the night—
Renascent boughs against a painted sky—
Sank down and down in me until at length
I scarce knew which was world and which was I.

GEORGE BURT LAKE



Spring Ramblings

"**W**HAT is so rare as a day in June?" But why that "so rare?" There are thirty of them! Which is no meager quantity, what? For say you encased thirty fingers of rye; harbored a tridecad of cooties; or, being non-Islamite, were involved in thrice ten contemporaneous matrimony—any magic rarity in thirty there?

"But," you say, "rare means not scarcity alone."

Granted! For the books do have it otherwise—underdone, for instance, as a steak; then, seldom met with; and thin; also, be it known, fine.

Now, was ever a day that was underdone? Hath not each its score of hours and four? Had ever a month a day that was thin? Can a day be seldom met? Eh? Oh, yes; each once, that's all! But wasn't there a yester one, and a yesterer one, and a yesterest—and on before that to "away back when"—and others to come galore? But "fine"—that's something quite else—therein is June not alone in rarity of her days.

For spring days do all be rare days, each of a kind apart, unique, variant. What's really rare, I'd guess, be not the days, but you and I, in knowing not the abounding joy of losing self in the rarity of them. For so full are the days of us and of the things we do, that we grow too busy making a living to grant ourselves the time to live. Long before "Man Rises to Parnassus" and grows so intricately social, living and making a living are not so far apart. But you and I, on the way up to Parnassus, must needs make some distinction there.

Having acquired, in the process, a flair for reducing experience to formula, we have taught ourselves glibly to prattle that "Man is a social animal." Some prefer to cease gibbling at the "animal," giving us the ludicry, "Man is a social." Now a social is a flock of folks engaged in the serious business of attempting to forget the serious business of making a living. Which is a tacit confession that living consumes energy, physical, mental and spiritual. It ultimately grows fagging.

Reverting now to the omitted formulaic animal, we arrive at something eminently sensible, if not highly intellectual. For

what does an animal (other than human) when fagged? Simplest and most sensible thing possible—retires from the scene of action. What, customarily, do we? Rush into something more exciting for "refreshment" and "stimulation"—which something is, in all frequency, a melee of folks.

Now, folks be to us the most interesting things of earth. But, because they are so very interesting—and ubiquitous—comes a time when we grow utterly surfeited with them. Happens, then, one of three things: We grow self-condemnatory, we abuse our neighbors, or we "go loco." Self-condemnatory, we chide ourselves for being abnormal and a-social (variously dictioned as per our training and linguistic accomplishments). We abuse our neighbors verbally, mayhemly or by continued perpetration of ourselves upon them. "Loco" we go in ways beyond enumeration, but in no wise more than by trying to "play the game" when the giddy thing has passed, temporarily, from a game to sheer drudgery.

All of which self-enforced activity we call living—playing our part in society. Being social animals, per formula, we must be wholly, consistently, persistently, eternally, uninterruptedly social. Delightfully inane, isn't it? Being social animals, it really is incumbent upon us to contribute something to that part of society in which we are forced to function.

Ben Franklin once said something very canny about a bag and withdrawals therefrom. Now, the human entity may be likened unto that bag. Expended physical energy may be replaced, within limits, by food, exercise and sleep. Depleted mental energy—the factual and thought content of a mind, and its ability to function—may be replenished and extended by rest, reading and experience, which latter includes new personal contacts and travel. To the renewal of diminished spiritual energy these all contribute right lustily; but, as food, to be nourishing, requires assimilation, so the material out of which is developed spiritual energy—the driving force which renders body and mind dynamic—must be assimilated. This demands solitude—opportunity to reflect, to "dream dreams" untrammelled by exterior personalities—a withdrawal from folks to field, forest and fen—the

fenestra through which the soul may gaze freely and unafraid into the Infinite, of which it is an infinitesimal fragment; and gazing, renew the power whereby it may find "favor with God and Man."

What more fitting time for this withdrawal into solitude, "alone with your soul," than in the gladsome days of spring? Days when Earth teems with myriad manifestations of the Infinite—with recurrent mysteries of life resurgent; days when frost-freed waters leap and bound, when snows grow mobile 'neath the magic wand of warmth; days when lifeless dust joins riotously with sunshine and moisture to rise, alive, in grassy blade and leafy stem; days when buds unfold and trees unfurl their canopies to morning dew and mid-day glow; days when songbirds lilt full-throated lays of joy renewed, when gentle zephyrs waft contentment over all the land and sunbeams smile softly to your soul.

Aye; these be days to tread alone the path to peace and light and truth. These, too, be days of many moods to meet the many moods to which your soul be heir. Be you fired by futile indignation? Go fend with blustering Boreas as he rides the wild March wind! Be you bowed by care? Gentle April's tears will lave the burden fast away. Be you sad? Bland May will soothe the heart distressed. Seems life vain and meaningless? Behold, gay, gladsome, fervent June blends hope and promise in serene unison of glorious fulfillment!

Do you long for beauty? Wend spring rambles out beyond the bounds of town where solitude reigns full sway; where foot paths wind among the trees, adown the brook, aloft among the crags; where landscapes rejoice the eye and tempt the camera that companions you, that, in afterdays, these realms of contentment may yet be yours to bring you joy that passeth understanding. For these things be not of Earth alone, but of the soul a part, linking the You and the Now with all Eternity. Go you where they be, and build anew your soul.

HARLOW D. GROSE,

Joliet, Ill.

The Georgia Variety

An Atlanta man visiting in California was being entertained by some friends. They first visited the railroad yards. The Cali-

fornia man asked his guest if he didn't think they had some trains. The guest smiled and said, "Why man, we have so many trains going through Atlanta that all the streets are viaducts."

They next visited the beach and upon being asked his opinion the visitor replied, "Just a few miles from Atlanta, there is the best beach in the world."

The next day they drove to the mountains and when asked how California stacked up with Georgia, Mr. Atlanta answered, "We have a mountain a few miles from my house made of solid granite with the whole Southern army carved on the side of it."

This made the Californians mad, so they found a terrapin and put it in the upholstered-Georgia's bed. That night when he started to retire, one of the locals turned down the sheet and showed him the animal and asked if there were bedbugs in Atlanta as big as that. The man laughed and asked, "It's a young one, isn't it? —*Georgia Tech. Yellow Jacket.*

The Perfect Short Story

The professor was giving his pupils some pointers on short-story writing.

"To be successful," he said, "the short story should have a touch of reverence, some reference to royalty and just a little spice of the risqué. See if you can write a little something for me tomorrow which will cover these points."

The next day, the budding author handed in the following: "My God!" said the countess, "take your hand off my knee!"

Thwarted Ambition

"Every time I take a trip to Europe I swear I will not get seasick."

"And do you keep your promise?"

"No; something always comes up to prevent it."

Ask the Cow!

A freshman was spending Saturday afternoon on a farm, the home of his best girl, and the scenery filled him with romance. As they walked through a pasture, he noticed a cow and a calf rubbing noses.

"Such a loving sight," said he, "makes me want to do the same."

"Go ahead," said the girl, "It's pa's cow. He won't care." —*Pharmacal Advance.*

Psittacosis

The latest fashion in the way
Of microbes and their capers
Is urged upon us every day
In all the daily papers.
Appendicitis is old stuff;
Stale news is each neurosis;
The patient who is up to snuff
Must now have Psittacosis.

We catch our ills from little bugs
And rats and fleas and skeeters;
Hay fever lurks in old fur rugs,
Untouched by carpet beaters.
From hooch we get assorted snakes,
And bats infest our garrets—
But here's a bunch of bellyaches
To be acquired from parrots!

Alas, I fear that it is not
A new thing in our nation;
We've learned from parrots now a lot
Of social conversation.
Let those whose joy is to repeat
All trite, bromidic folly
Accept the bitter with the sweet,
And catch their deaths from Polly!

—TED ROBINSON,
in *Cleveland Plain Dealer*.

A Hit

It was the first time the baseball player
had ever played golf. He hit one straight
down the fairway, then shouted, "Which
way do I run?"—*Patchwork*.

"Poppa, inquired little Ikey, "vat is
Onkel Cohen pulling dose fedders from de
chicken for, huh?"

"Vell, Ikey, my poy," explained Moe, "I
spose it he is getting down from the chicken
for a pillow."

"But vy did he get up dere, fadder?"

"Get up vere?"

"Vel, you said he was getting down,
didn't you?"

"No, no, I said he was getting down off
the chicken, not—Ikey, if you don't quit
asking foolish questions, you're going to
bed."—*Bul. Chicago M. S.*

Pay Your Money and Take Your Choice

Surprising as it may seem, a regular
graduate in Medicine has set out to eclipse
his brethren of the "twilight zone," and the
following advertisement appears in the De-
cember, 1929, issue of a new "uplift"—
by the way, one wonders why the "up-
lifters" are so fond of Naprapathy, Chiro-
practic and similar cults — magazine,
Progress.

We have omitted the address and tele-
phone number, as we do not care to give
Dr. Wood any free advertising among any
of our readers who may be susceptible to
his blandishments.

DORR ELDRED WOOD, M.D.

CONSULTATION FREE

MENTALOGY — HOMEOPATHY
RADIUM — AETHERONICS
ELECTRONICS — ELECTRICITY
PHYSIO-THERAPY — CHROMO-
THERAPY — OSTEOPATHY
DIETETICS — CHIROPRACTIC
GLASSES FITTED

Modern Youth

"How old are you?" inquired the visi-
tor of his host's little son.

"That is a difficult question," answered
the young man, removing his spectacles
and wiping them reflectively. "The latest
personal survey available shows my psy-
chological age to be 12, my moral age 4,
my anatomical age 7, and my physiological
age 6. I suppose, however, that you refer
to my chronological age, which is 8. That
is so old-fashioned that I seldom think of
it any more."—*Forbes Magazine*.

Mysteries of English

A gentleman met an acquaintance, a
Frenchman who was just learning English,
and accosted him cheerfully:

"How do you do?"

"Do vat?" asked the puzzled Parisian.

"I mean, how do you find yourself?"

"Saire? I never lose myself."

"You don't understand; I mean, how do
you feel?"

"I feel smooth. Feel me."

Thumbnail Therapeutics

Action of Digitalis

There is no essential difference between the behavior of digitalis in children and in adults. The drug is less often seen to produce striking improvement in children than in adults, because the type of heart failure that is relieved most effectively by digitalis (congestive heart failure without active infection of the heart) is relatively common in heart disease among adults, but relatively rare in that among children. In those cases in which less definite therapeutic effects are obtained, insufficient or excessive digitalization is more apt to occur because of the absence of a satisfactory guide to the intensity of digitalis action.—DRS. H. GOLD and A. C. DEGRAF, New York, in *J.A.M.A.*, Apr. 27, 1929.

Heliotherapy in Tuberculosis

In using heliotherapy in the treatment of tuberculosis, the cool, fresh air to which the body is exposed plays a part, and the patient must become accustomed to this gradually. One can endure decidedly cold air, if it is still. *Avoid wind!*

The carbon arc lamp, with 25 amperes of current across the arc, is the best present substitute for sunshine: But do not neglect the cool, fresh air.—DR. RICHARD T. ELLISON, Philadelphia, Pa.

Elimination in Pneumonia

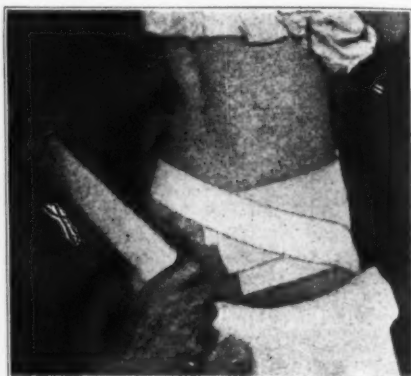
In pneumonia, attend to the patient's eliminative processes, especially by the bowel. I have never seen a pneumonia patient die with a flat belly.—DR. ROY W. FOUTS, Omaha, Nebr.

Diathermy in Aspiration Pneumonia

Aspiration pneumonia, like that following tonsillectomy, seems not to be benefited by diathermy.—DR. A. A. LILIEN, New York City.

Lower Back Strain

Adhesive plaster strapping is effective in strains of the lower back, but should entirely encircle the lower part of the trunk.



Anterior Strips in Place. Applying Posterior Strips.

The patient stands with the abdomen retracted; the surgeon is seated behind the patient. Three 2-inch straps are applied anteriorly, the lower limit of the dressing extending practically to the level of the trochanters. The posterior strips are then applied. These should extend well forward of the anterior superior spine on both sides and they should be applied under some tension, as though the effect to be obtained were a compression of the sides of the pelvis.—DR. A. KRIDA, *Am. J. Surg.*, April, 1929.

Sacral Fistula Cured by Galvanic Current

A pilonidal cyst (sacral fistula) was cured by the following method: The positive pole of a galvanic current was introduced into the sinuses; the negative pole was attached to a pad moistened with saline solution placed on the patient's back; the current was turned on and gradually increased until 20 ma. was registered. Treat-

ment lasted 20 minutes, at first at 5-day intervals, later at 7 and finally at 10-day intervals. The entire series required about 3 months. There was much destruction and exfoliation of disintegrated material containing hair and cellular debris.—DR. E. R. MAILLARD, of New York, in *J.A.M.A.*, Nov. 2, 1929.

Physician's Liability Regarding the Use of X-Rays

In a recent case, the Court of Appeals confirmed the jury's award of heavy damages against a physician who had neglected to use the x-rays in a fracture case which became infected, with ultimate deformity. The Court held that the physician had neglected to use recognized methods of determining how the bone could best be set.—GEO. METZGER, Attorney-at-Law, Cincinnati, in *Radiol. Rev.*, Sept., 1929.

Amiodoxyl Benzoate in Arthritis

Amiodoxyl benzoate (100 cc. of a 1-percent solution, intravenously, every 3 to 5 days for 6 to 10 treatments) shows 60 percent of favorable results in arthritis. It stimulates leukocytosis and antibody formation and has a strong analgesic effect. The calcium salt (Calciodoxyl) may be given by mouth.

Salicylates should not be given when using Amiodoxyl, as they may cause severe reactions.—DR. N. J. SEYBOLD, Toledo, Ohio.

Antivirus in Styes

The treatment of styes is a trial to most physicians. Dressings wet with Besredka's staphylococcus antivirus, changed once a day, will usually clear up these annoying infections very promptly.—DR. J. F. BIEHN, Chicago, Ill.

Dacrocystitis

Up to date, no operation has been devised that can warrant a cure in a given case of dacrocystitis, with full restoration of function of the lacrimal tract. For the present, at least, we must be satisfied with the usual Stilling operation, followed by the sound, and the employment of a suitable style to be worn almost indefinitely or until there has been established reason-

able hope for the permanent functioning and patency of the nasal sac and duct. Resection of the lacrimal sac is to be condemned in most instances.—DR. JOHN C. LESTER, of New York, in *M. J. and Record*, June 5, 1929.

Insulin in Pernicious Anemia

Small doses (20 to 30 units) of insulin, given twice a day, 1/2 hour before meals, have produced marked improvement in cases of pernicious anemia, especially when followed or accompanied by moderate amounts of liver or liver extract.—DR. L. VON VARGA, in *Lancet* (Lond.), Oct. 12, 1929.

Metaphen in Glycerin

Those who like to use glycerin for lubricating sounds and other instruments, and who would appreciate a feeling of certainty that these things are sterile when removed from that fluid, can assure such a condition by adding to it a 1:500 solution of Metaphen, in any desired proportions. Equal parts of the two give a 1:1,000 solution of Metaphen in 50 percent glycerin; one part of the former to three of the latter give a 1:2,000 Metaphen in 75 percent glycerin solution—an actively antiseptic and highly satisfactory combination.—GEORGE B. LAKE, M.D., Chicago.

Ephedrine in Spinal Anesthesia

Ephedrine has possibly contributed as much to the safety of spinal anesthesia as did adrenalin to the success of local anesthesia.—DR. GEO. P. PITKIN, in *A. J. Obst. and Gynec.*, Aug., 1929.

Placenta Previa and Cesarean Section

To me it seems that cesarean section is too radical a procedure for the treatment of placenta previa. I was trained to treat placenta previa conservatively. Apparently, from statistics and from what I have observed, the only advantage of cesarean section in placenta previa is the fact that we get more live babies. However, it is known that, unless the pregnancy is near term, our chance of saving the baby is very slight, because of the prematurity. As a matter of fact, statistics will show a slightly better result for the baby with cesarean section in

placenta previa, but the difference is so slight that, to my mind, we are not justified in subjecting the mother to the additional risk of so serious an operation for the slight improvement in fetal mortality.—DR. R. S. SIDDALL, Detroit, in *J. Mich. St. M. Soc.*, Aug., 1929.

Vitamin Feeding in Tuberculosis

A group of advanced pulmonary tuberculosis patients (who had failed to respond to a few years of routine treatment) were maintained for 6 months on a special diet. This was of the average value of 3,500 calories; base-forming; low in sodium chloride, animal protein and carbohydrate; but rich in fats and vitamins. About one-third showed a substantial symptomatic improvement. The acid-base equilibrium of the patients studied before and after the dietary shifted toward the basic side.—DRS. E. MAYER and I. N. KUGELMAS, Saranac Lake, N. Y., in *J.A.M.A.*, Dec. 14, 1929.

Sea Water as a Therapeutic Agent

Undiluted, pasteurized sea water has been given as a drug, in intravenous injections, to about 50 urologic and syphilitic patients who were neurasthenic, or poorly nourished or both. Dosage ranged from 5 to 10 cc. The improvement in nutrition suggests therapeutic possibilities that deserve further investigation.—DR. C. L. DEMERITT, New York City, in *Urol. and Cutan. Rev.*, Nov., 1929.

Thyroid Gland and Infections

It has been found from investigations that the iodine content of the thyroid is diminished in infectious diseases; it may be assumed that the thyroid plays an important part in infectious diseases and especially in pulmonary tuberculosis. Iodine therapy should be of value on this account.—DR. S. LOUMOS, of Chicago, in *M. J. and Record*, April 17, 1929.

Hemorrhage in Gastrointestinal Ulcer

There should be no surgical intervention immediately after hemorrhage in gastric or duodenal ulcer, if at all avoidable. There is no situation which is more likely to be followed by fatality than immediate operation for bleeding gastric or duodenal ulcers.

In a great majority of instances hemorrhages from gastric and duodenal ulcers will not be fatal, and today, with transfusions available as they are, rarely should there be a death as a result of delay. Gastric operations, therefore, for hemorrhage should be undertaken only after the blood volume has been restored to something like its normal status.—DR. F. H. LAHEY, Boston, in *Canad. M.A.J.*, Feb., 1929.

Wound Infections

At the first sign of infection the wound should be put at complete muscular rest. If near a joint, this should be immobilized by splints. If on the abdomen, this should be put at rest by reducing vomiting, distention or cough to a minimum, even to the extent of applying opium as the "physiologic splint."—DR. JOSEPH K. SWINDT, in *A.J. of Surg.*, Feb., 1929.

Posture for Relaxation

Movies taken of sleepers indicate that the greatest possible relaxation occurs when the individual coils himself like a kitten and when he sprawls out like a swimmer.—*Science Service*.

Amytal Anesthesia

Amytal gives satisfactory anesthesia and fewer untoward postoperative results, in the average case, when preceded by chlorotone and morphine than when used without these drugs. Delirium following its use is more often seen after large than after small doses.—DR. J. S. LUNDY, Rochester, Minn., in *Anesth. and Analg.*, Sept.-Oct., 1929.

Behavior Problems of Childhood

The behavior of the child is conditioned by its reaction to the things about it. If there is a bad inherited capacity for reaction, the outlook seems hopeless; but if the capacity for reaction has been due to the influence of the environment, the ability to react well or ill can be made or broken by environment. Environment is the factor which establishes a habit in a child, and the continuing or breaking of that habit depends on continuing or breaking the environment. This means that the child can be reconditioned or the old habit broken by changing its environment, with the proper

influences brought to bear so as to recondition it.—DR. R. A. PHILLIPS, Cincinnati, in *Ohio St. M. J.*, Oct., 1929.

Benzene Poisoning Improved by Liver

In a case of chronic benzene poisoning, in which three blood transfusions had not brought about any improvement in the blood picture, definite improvement followed the ingestion of whole liver. The chief effect of the liver diet in this case, however, was apparently on white rather than red cell production. The reticulocyte response, though present to a slight degree, was not similar to that found in pernicious anemia.—DR. A. R. SMITH, New York City, in *J.A.M.A.*, Dec. 21, 1929.

Metaphen in Ringworm and Pruritus Ani

The following prescription has proved highly satisfactory in the local treatment of ringworm of the toes and fingers and in pruritus ani. In the latter condition, a hot sitz bath should be taken and the parts dried before applying the lotion.

R Calamine prep.	5 parts
Sulphur precip.	5 parts
Glycerin	12 parts
Metaphen (1:500)	15 parts
Aqua dest.	63 parts

M. et Sig.: Apply morning and night to the affected parts and allow it to dry on the skin.—DR. H. A. JARRE, Detroit, Mich.

Bananas as Baby Food

On account of their high carbohydrate and mineral (especially iron) content, thoroughly ripe bananas make an excellent diet for young children and infants.

The banana should be completely macerated. To a 4 or 5 months old baby, only 1 teaspoonful of the finely-mashed pulp is given daily for the first few days. If well tolerated, the amount is gradually increased to 6 or 8 teaspoonfuls. The child should not be forced, but gradually induced to the diet.—DR. L. VON MEYSENBURG, *New Orleans M. and S. J.*, Aug., 1929.

Liver Extract in the Anemias

Prof. Pal reports excellent results from the use of liver extract in acute and chronic pernicious anemia and secondary anemia. In the acute cases, blood transfusions, in addition to the liver extract, were required.—DRS. E. HUTH and S. KESSLER, in *Wien. klin. Wchnschr.* 41, 1928.

Epinephrin in Food Poisoning and Serum Sickness

For the temporary relief of acute attacks of urticaria, due to food poisoning, serum sickness, the bites of insects, etc., epinephrin, in doses of from 6 to 12 minims (0.4 to 0.8 cc.), will usually give relief.—DR. RAY M. BALYEAT, in *J. Lab. and Clin. Med.*, Aug., 1928.

Insulin in Menorrhagia

Insulin lessens the duration and intensity of the menstrual flow in non-diabetic women, and is useful in the treatment of menorrhagia of ovarian origin. A dose of 40 to 50 units should be injected twice daily, before the principal meals, for 3 or 4 successive days, beginning on the fourth day of the period.—DR. C. COTTE, in *Presse Méd.*, Feb. 11, 1928.

Prevention of Myopia

When a low grade of myopia is present in a child, active treatment is indicated. This includes rest of the eyes, by avoidance of close work and by paralysis of accommodation for the space of two months, attention to nutrition and the prescription of physical exercise. By these means it is hoped that many children may be saved the necessity of a life-long use of corrective lenses.—Editorial, *J.A.M.A.*, Nov. 23, 1929.

Peri-Rectal Abscess

Avoid surgical interference in cases of perirectal abscess complicating ulcerative colitis, as disaster is almost sure to follow. The utmost conservatism is indicated.—DR. J. A. BARGEN, Rochester, Minn.

Current Medical Literature

An Operation for Pendulous Breasts

Dr. Clifford F. Dowkontt, of New York, states in *M. J. and Record*, for Dec. 4, 1929, that a pendulous condition of the breasts exists far more commonly than is generally supposed, and very often constitutes an actual physical deformity, presenting many of the aspects of tumor-like growth.

Women so afflicted complain of dragging sensations and sometimes actual pain within the breasts themselves, as well as in the axillary and subclavicular regions. There is likely to be some interference with the movements of respiration and free motion of the arms. The posture becomes one of stooping forward, partly from a desire to hide the deformity and partly from the dragging weight of the breasts. Women are apt to complain of looking ten or fifteen years older than they really are and are willing to suffer considerable discomfort from tight brassieres, elastic bandages, etc., to counteract the change in their appearance. Moreover, there is an undeniably unfavorable mental reaction present in these cases, which may vary from a sense of embarrassment to suicidal tendencies.

In a considerable proportion of cases there is an associated chronic mastitis, as evidenced by a lumpy condition of the gland. Glass attributes this to a stretching of the fascia and lymphatic vessels. In addition, I think it important to bear in mind that there exists a certain degree of obstruction of the milk ducts within the gland, explained by its abnormal shape and the pressure on certain portions of the gland by other parts of the breast overlying them.

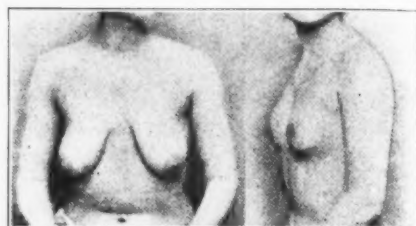
Constricting brassieres or appliances which flatten the breasts and press them downward in an unnatural position—measures very often resorted to by patients suffering from pendulous breasts—increase the pressure on the ducts, giving rise to further reactive inflammation.

The clinical importance of chronic mastitis caused by obstruction of the ducts has been emphasized by the work of Adair and Bagg.

In this connection it has been noted that a return of the pendulous breast to its normal shape and position, as a result of plastic operation, has been followed by a disappearance of preexisting chronic mastitis.

Operative interference therefore should aim: (1) to replace the breast in its original position; (2) to restore its normal contour; (3) to insure the permanency of these procedures; and (4) to accomplish these with the minimum of risk and scar.

The author's technic is as follows: Incision No. 1 is carried through the skin and fatty tissue around the entire breast at the junction of the skin covering it with that of the chest wall. Incision No. 2 is carried through the skin in a circular manner and at a distance from the nipple which will allow just sufficient skin to



Left: Moderate degree of prolapse of the breast. Right: Contour following operation. (This patient was able to obtain employment as an artist's model.)

cover the gland. The skin and subcutaneous tissue between these two circular incisions is then removed. An incision is made in the pectoral fascia, beneath the topmost part of incision No. 1, a lip is everted and the corresponding margin of the gland is sutured to its under surface. The two skin incisions are then carefully approximated and the wounds dressed. Patients are confined to bed for a period of from one week to ten days, after which time they wear a supporting bandage for two weeks longer.

The advantages gained by this operation are: (1) The gland is preserved intact, therefore its functions are presumably retained in full; (2) existing chronic mastitis, with its attendant danger of cancer, as pointed out by Adair and Bagg and Ewing, has been observed to disappear completely; (3) the fascial suspension has proved to be adequate, even for heavy breasts and for a period of years, therefore a return of the pendulous condition is extremely unlikely; (4) due to the fact that it is a simple procedure, it is free from the complications, often disastrous, met with in other methods; (5) it removes the necessity of resorting to the various forms of artificial support, such as brassieres, some of which are harmful in connection with the possible causation of malignant disease; (6) the breasts are placed in their normal position and their normal contour is restored, thereby greatly improving the patient's appearance and benefiting her mental attitude.

Dr. Dowkontt believes this to be the operation of choice for most cases of pendulous breasts, particularly the more advanced cases, those in which there is considerable subcutaneous fat, and for those cases in which the weight of the gland is an important factor.

However, in those cases in which the gland is not excessively large and where there is only a moderate amount of subcutaneous fatty tissue, a method which places the scar at the areolar margin and in the lower half of the breast, has been used by the author with success. The same technic may be used where the degree of prolapse is not great.

Local Immunity

Dr. Lazar Rosenthal, writing in *Hebrew Physician*, Jan., 1930, remarks that not all phenomena in local immunity can be explained on the sole basis of antibodies and phagocytosis. A great number of data tend to show that there are other factors involved. One of these factors, that of local immunity, has been developed lately by Besredka and his followers.

The nature of this factor is the following: In many infections there is only one organ which is susceptible to the attacking microbe (e.g. the skin in anthrax infection of the guinea pig; the intestinal tract in typhoid and dysentery, etc.), while all the other organs are by nature refractory to the action of the microbe. In order to obtain immunity of the whole body it is sufficient to immunize the susceptible organ. Thus, to immunize a guinea pig against anthrax it is necessary to inject the virus intradermally; to immunize a man against dysentery, it is sufficient to introduce, by mouth, dead dysentery bacilli, etc.

Instead of the usual vaccines, Besredka proposes, for the treatment of staphylococcus and streptococcus infections, the so-called "antivirus" which is a filtered, old broth culture of these organisms; that antiviral is applied directly to the affected tissue in order to create a local immunity.

The Long and Short Interval Treatment of Hay-Fever

A number of investigators concur in the view that treatment with the predominant member of a biologic group of pollens causative of seasonal hay-fever is sufficient to care for the entire biologic group.

What is termed the "long" interval treatment consists of determining the threshold of reactivity, by testing cutaneously with various dilutions of the causative pollen; viz., 1:10,000; 1:5,000; 1:1,000 and 1:500. Treatment would begin with the dilution next to that which gave the last reaction, giving 2, 4 and then 6 minims of each dilution, at 5 or 7 day intervals, until the maximum dose of the 1:500 solution was given.

In the "short" interval treatment the foregoing is modified by administering pollen extracts once or twice a day for the lesser concentrations and continuing at 24 or 48 hour intervals, governed solely by the degree of local reaction following the previous dose.

In *Ann. Intern. Med.*, Jan., 1930, Dr. N. S. Schiff, of New York, states that, as the results of tests in series of cases, the intensive or short interval treatment seems the method of choice in the treatment of hay-fever. Glycerolated pollen antigen was administered in the group receiving the short interval treatment. This is a 66 2/3 percent glycerol and 33 1/3 percent saturated sodium chloride preparation, consisting of 15 individual doses with 2 1/2 units in the first dose and ending with 3000 units in the 15th dose. Glycerolated pollen antigen is manufactured and can be obtained through the usual channels of supply. Excellent results were obtained in 74 plus percent of the cases in this group. There were no absolute failures. In the

long interval treatment group there was 59 percent satisfactory results with 2 failures.

Maximum Doses of Neoarsphenamine with Minimum Risks

Dr. A. Bernay, of Lyon, France, in *Urol. and Cutan. Rev.*, Jan., 1930, recommends massive rather than the customary small dosage of neoarsphenamine, in order to obtain the maximum results and the greatest coefficient of security in the treatment of syphilis; but says that certain modifications of the classic methods must be made. Thus, he employs the method of dilution of the old arsphenamine; i.e. dilution in 40 or 50 cc. of bi-distilled water or artificial serum 4:1,000. The injection is by a slow-drop, gravity flow into an elbow vein, there being a difference of about 60 cm. between the level of the fluid container and the patient's arm. The injection should occupy 3 to 4 minutes.

Another precaution is the preventive injection of 1 milligram of adrenalin (epinephrin), which has proved itself of value in the treatment of accidents of neoarsphenamine treatment. Or this may be replaced with still more security, according to the author, by hyposulphite of soda or hyposulphite of magnesium, which are less toxic and better tolerated. The hyposulphite of soda is employed in intramuscular injections of 10 cc. A solution of hyposulphite of magnesium is used intramuscularly also, 5 cc. of a solution of hyposulphite 20, distilled water 100.

If massive dosage of neoarsphenamine should affect the liver or spleen, the best defense consists of injections of hepatic or splenic extracts.

The Causes of Symptoms in Tuberculosis

Dr. Florence Rena Sabin*, of the Rockefeller Institute of Medical Research, and her associates, have been finding out some important things about the nature of the tubercle bacillus and the changes which occur in the blood in tuberculosis.

Dr. Albert Edward Wiggam, author of "The Next Age of Man" and other popular books on science, writes about her work in the *Herald Tribune* (New York) for Dec. 1, 1929.

It appears that the group of researchers who work with Dr. Sabin has found that tubercle bacilli are composed, like other organized tissues, of proteins, carbohydrates and fats, and that these chemical substances, when introduced separately into living bodies, produce specific results which duplicate certain groups of symptoms in tuberculosis.

The proteins, when injected separately into healthy animals, give rise to hemorrhages and fever; the carbohydrates (sugars) kill tuberculous animals rather promptly, but are harmless to healthy animals; the separated fats will, when injected into healthy animals, cause the development of tumors in the body, similar to those which, in tuberculosis, are called tubercles.

*This is the Dr. Sabin who recently received the \$5,000 award from *Pictorial Review* as being the woman who had made the most outstanding achievement in the United States during the past year.—Ed.

It appears reasonable to believe that the symptoms of clinical tuberculosis result, in part at least, from the leakage into the blood stream of the various chemical fractions of the dead tubercle bacilli, and that the nature of the clinical manifestations — tubercle formation (fats); hemorrhages and fever (proteins); or rather prompt death (sugars)—depends upon the predominance of one or another of these chemical fractions.

Viewed from the biologic standpoint, Dr. Sabin is convinced that the monocytes in the blood are not, as has frequently been claimed, immature polymorphonuclear leukocytes, but constitute a distinct variety of the white blood-cells. These cells increase in numbers, at the expense of the lymphocytes, when tuberculosis is progressing, and decrease (the lymphocytes increasing) as the disease retrogresses.

No one can, at present, prophesy what effect these discoveries may have upon the prophylaxis and treatment of tuberculosis; but every discovery of established facts in nature brings us nearer to the Truth, which makes men free.

Migraine Due to Endocrine Dysfunction

In *New England J. Med.*, Oct. 24, 1929, Dr. N. C. Stevens states that he is convinced that the causality of migraine lies deep-seated in the germ plasm, that it is an hereditary, constitutional disease and that it seems to be associated closely with a dysfunction of the endocrine glands.

The occupation, environment and state of health of the individual have much to do with the frequency and severity of the attacks.

In treatment, every effort should be made to improve the general health. Fresh air and sunlight are valuable adjuncts. Injections of iron, arsenic and strychnine are of value in many cases. Thyroid, 1 to 3 grains (0.065 to 0.2 Gm.) a day (when the basal metabolism is sub-normal) and whole ovary, 5 grains (0.3 Gm.), three times daily, should be given and continued as long as the symptoms last. Mixed gland, when the basal metabolism is normal, is often more effective. Luminal (phenobarbital) is used freely in the beginning, in doses of $\frac{1}{2}$ -grain (0.03 Gm.) three times a day, to eliminate the nervous element.

In the majority of cases migraine ceases between the ages of 48 and 55 years, with or without treatment; or, if the attacks do not cease then, they change their character.

Anorexia in Childhood

The problem of the chronically anorexic child is discussed by Dr. F. W. Schlutz, of Minneapolis, in *J.A.M.A.*, Jan. 11, 1930.

There are two types: The hyposthenic or asthenic, which is constitutional or a transmitted characteristic; the other type is brought about by prolonged action of some disease process or focus. There is no question, according to Dr. Schlutz, that focal infectious, located about the head, are by far the major cause of organic anorexia in the child.

The successful treatment of chronic, organic

anorexia includes complete removal of foci of infection, a sensible choice of food, adequate rest and the avoidance of fatigue, with the intensive application of radiant energy.

With the constitutional type, the environmental factor should first be dealt with. Complete temporary removal of the child from its customary surroundings is necessary. Foods of high concentration and small volume should be selected; the excessive consumption of cow's milk should be checked. Both starving and forced feeding may be justified in particular cases.

The selection of food should not be left to the child. Mental activity and school hours should be cut down. The liberal use of cod-liver oil is advocated.

Spastic Colon and Mucous Colopathy

Spastic colon is often described as a mucous colitis but, as a rule, we deal with a motor and secretory neurosis rather than with actual inflammation. True colitis may, however, be complicated by paroxysms of spasm and of mucous secretion.

In *Am. J. Med. Sc.*, Nov., 1929, Dr. Lewellys F. Barker, of Baltimore, states that treatment may be divided into: (1) That of the attacks and (2) that of the interparoxysmal periods. In severe attacks the pain may require immediate relief and for this a dose or two of codein or of pantopon will usually suffice, and, in addition, the patient should swallow a tablet (1 mg.) of atropine or novatropine (2.5 mg.). Purgatives and colonic irrigations are best avoided.

After the acute symptoms have subsided, the patient may take belladonna, atropine, bellafolin or novatropine, three times a day for a few days, and a small, intrarectal injection of warm olive oil at 9 P.M. for a few nights.

Following an attack, the treatment should be directed toward the prevention of spasm and constipation, toward combating any complicating catarrh of the colon and overcoming the underlying general neurosis. No conditions, local, general or habitual, that could contribute to the invalidism should be overlooked.

A bland rather than a coarse diet should be ordered.

Parasympathetic tonus may be decreased by prescribing Collip's parathyroid hormone, along with calcium lactate, using about 2 Gm. of calcium lactate thrice daily and injecting 15 units of parathormone (Collip) intramuscularly every third or fourth day.

Surgical operations for uncomplicated spastic colon and mucous colopathy seem to the author not only unjustifiable but distinctly reprehensible.

Breast and Abdominal Binders

The extemporized breast and abdominal binders, which are frequently needed during the puerperium, are decidedly unsatisfactory and difficult to apply.

Dr. Ira Wilens, adjunct obstetrician to Sydenham and Beth David Hospitals, New York, reports what seems to be an excellent solution to the two problems in *J.A.M.A.*, Jan. 25, 1930. The binders are made of ordinary pre-shrunk, unbleached muslin and two standard sizes

will fit most women—the large size (which will be described) for women weighing about 150 pounds, and the small size for those of about 100 pounds. In special cases they may be cut to fit the individual.

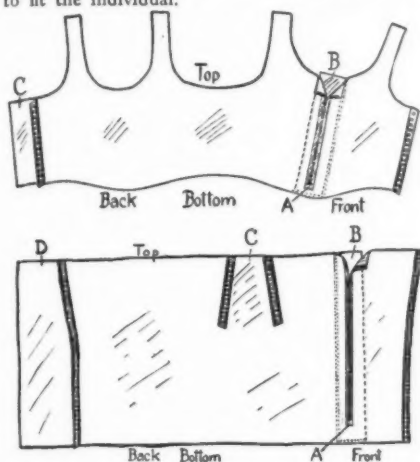


Fig. 1.—Diagrams of Breast (above) and Abdominal (below) Binders. *Legends:* (above) A. Hookless fastener, 14 inches long; B. 3-inch Flap, Underneath; C. 4-inch Flap. (below) A. Hookless Fastener, 18 inches long; B. 4-inch Flap Underneath; C. Corset Eyelets, 8 inches long, D. 6-inch Flap.

Fig. 1 (above) shows the pattern for the breast binder, which is made as follows:

Ten inches from the left front edge (as it appears when placed on the patient) there is a hookless fastener ("zipper") 14 inches long with a 3-inch flap underneath. Along the same left edge there is a row of corset eyelets; 4 inches from the under free edge of the binder there is another row of corset eyelets. The 4-inch flap serves to protect the underlying skin.

The binder is slipped under the patient so that the hookless fastener (closed) lies in front in the middle and the eyelets are on the left side. The eyelets are threaded with regular corset laces and the binder is drawn up as firmly as necessary. The shoulder straps are pinned with safety pins.

The advantages of this binder are:

- 1.—It is easily applied.
- 2.—The binder is put on by the nurse but once a day. Her time is available for other duties more important than sticking safety pins.
- 3.—The binder is quickly opened by means of the fastener and the breasts are readily delivered, for nursing, by the patient without any outside aid.

The abdominal binder, (large size) is 20 by 42 inches. Six inches from one edge there is a hookless fastener, 18 inches long, extending from the top of the binder to within 2 inches of the bottom, as illustrated in Figure 2. There is a flap 4 inches wide underneath this fastener to protect the skin. On the left side (when fitted to the patient) there is a row of regular corset eyelets extending the entire width of the binder. Six inches from the under free edge of the binder there is another row of corset eyelets extending the entire width. The 6-inch flap

protects the underlying skin. Six (6) inches to the right of the hookless fastener (when fitted to the patient) is a pair of strips of corset eyelets, 8 inches long and six inches apart, coming to the top of the binder. This space will allow conformation to the body when laced. (Fig. 1—below).



Fig. 2.—Sketches of Abdominal (left) and Breast (right) Binders, as Applied.

The binder is slipped under the patient, with the hookless fastener (closed) in front, and ordinary corset laces fitted in the eyelets and drawn snug. It comes far enough below the hips to stay in place, and the fastener can be readily opened for inspection of the abdomen, without disturbing the binder.

Sketches of both binders, applied to a patient, are shown in Fig. 2.

Carbon Monoxide

The Committee on Poisonous Gases of the A.M.A. has issued a report, drafted by Dr. Yandell Henderson, of New Haven, Conn., which appears in *J.A.M.A.*, Jan. 18, 1930.

The following conclusions and recommendations are offered:

Education of the public regarding the hazard of carbon monoxide in daily life is not now enough, by itself, to prevent numerous cases of asphyxiation. In addition, regulations and their effective enforcement are needed to remedy the common household conditions leading to asphyxiation, such as badly designed stoves, flexible tubing, the quarter meter, and lack of flues on water heaters.

The increasing use of city gas for heating homes may involve a large increase of fatalities, both of individuals and of entire families, unless an efficient inspection, supervision and control of household gas appliances is established.

City gas of high calorific value contains much less carbon monoxide than gas of low calorific value. It is in the interest of public health and safety that the amount of carbon monoxide in city gas should be reduced. To this end the price of gas should be based on the heat unit instead of the cubic feet. Scientific investigation for the development of less poisonous gas deserves liberal financial support.

The hazard to life of automobile exhaust gas in private garages should be called to public attention by annually-repeated warnings, just before cold weather begins. The hazard to health in large garages and in repair shops should be controlled by sanitary regulations, actively enforced.

For use in rescues and repairs, the hose mask is safer than the absorbent type of gas mask. Both these types of mask are much safer than self-contained oxygen apparatus.

Pulmotors, lung motors and other mechan-

ical devices for artificial respiration should be discarded and replaced by general training in the prone pressure method of artificial respiration.

Carbon monoxide combines with the hemoglobin of the blood. It thus excludes oxygen and causes asphyxia. Inhalation of oxygen and carbon dioxide induces a rapid elimination of carbon monoxide. In many other forms of gas poisoning as well, stimulation of breathing by this inhalation accelerated the elimination of the toxic gas or vapor through the lungs.

The victims of carbon monoxide asphyxia should be treated as follows: (a) Immediate artificial respiration by the prone pressure method, if respiration has stopped; (b) inhalation of a mixture of oxygen and 5, or better 7 percent carbon dioxide—or, if this is not available, oxygen alone—continued until the pulse and temperature are normal; (c) measures to keep the patient warm; (d) prevention of any muscular exertion; (e) no transfusion of blood; (f) no hypodermic medication.

All rescue crews of the public service corporations and of the fire and police departments, and certainly all hospital ambulances, should be equipped with inhalators.

Clinical Experience with Amniotin

The presence of an ovarian hormone was demonstrated by Allen and Doisy in their preparations from Graffian follicles. In *Am. J. Med. Sc.*, Nov., 1929, Drs. E. L. Sevringhaus and J. S. Evans, of Madison, Wisc., report on their clinical findings in 25 cases treated with Amniotin. This is a preparation of the Allen and Doisy hormone, secured from the amniotic liquor of cattle—an aqueous solution prepared for subcutaneous injection.

The authors find that the use of Amniotin has been of marked value in the relief of the vasomotor phenomena of the menopause and in promoting feminine development in one woman of infantile type.

The Endocrines and Crime

In *M. J. and Record*, Dec. 4, 1929, Dr. J. R. Harding, of Elmira, N. Y., emphasizes the importance of abnormal endocrine conditions in criminology. In correctional institutions the protection of society should be secondary to the cure and moral reformation of the criminal.

As a prison physician, Dr. Harding believes in pluriendocrine therapy. He uses a standard solution of liquid hormones as a foundation vehicle, adding such other hormones as individual study suggests. As a general rule there are at least six types of endocrine variations to be found in every prison: The persistent thymus type; the hyperthyroid type; the dizzy or quasi-epileptic type; the psychotic or near-insane type and the neurasthenics.

The elixir used as a foundation contains the following combination of hormones: Entire pituitary gland, 1/20 grain (3.2 mgm.); thyroid gland, 1/10 grain (6.4 mgm.); suprarenal gland, 1/10 grain (6.4 mgm.); ovary, 7/20 grain (22.4 mgm.) and testis, 8/20 grain (25.6 mgm.).

The thymus is considered largely responsible for endocrine dysfunctioning during early life, and when there is any evidence of a persistent thymus it should be treated with x-rays prior to general hormone treatment.

Dr. Harding has repeatedly seen almost immediate improvement from the use of these hormones where tablets or capsules of the same formula have failed to give results.

Carbon Monoxide Poisoning

In *Ann. Intern. Med.*, Dec., 1929, Dr. C. K. Drinker, of Boston, remarks that, in New York City, exclusive of Brooklyn, there are about 800 fatalities annually from carbon monoxide poisoning. The emergency method in practice is the artificial induction of breathing of a mixture of 95 percent oxygen and 5 percent carbon dioxide, supplies of which are kept available at various emergency stations throughout the city. It has been found, however, that the response to this, in severe cases, has varied considerably and, from experimental work, it has been found that increasing the carbon dioxide concentration to 7 (or even 10) percent has been very effective.

It is thus evident that, in the treatment of carbon monoxide poisoning, the concentration of carbon dioxide used, as these cases reach the hospital and inhalation treatment is frequently available, should be increased and freely increased when the patients are first seen by the physician in charge.

Emotional Data in History Taking

Dr. J. Favill, of Chicago, in *Ann. Intern. Med.*, Nov., 1929, suggests that internists should, in the taking of all medical histories, make definite inquiry about possible disturbing emotional factors. Emotions are undeniably the cause of many and varied symptoms which themselves start new emotional disturbances.

The medical examiner should try to elicit from the patient information regarding possible financial strain, business worries, legal complications, social, domestic, sexual or religious difficulties, fear of future events or disease, past shocks, grief or disappointment, unspecified psychic factors, habits, hobbies, etc.

Business Efficiency in Office Practice

In *Bull. Ambulant Proctol.*, Nov.-Dec., 1929, Dr. W. W. Custis, of Dayton, calls attention to a number of matters which make for efficiency in the business arrangements of a physician's office. Among these are the following.

The waiting room should be attractive, but not ostentatious.

There should be a sympathetic, cheerful and competent secretary or secretary-nurse, as a link between the reception room and the doctor. She takes some of the history.

The doctor's appearance and surroundings should be in accordance with his dignity. His manner should be kindly, patient and confidence-inspiring. The history should always be taken before an examination is made. A fee should be charged for an examination.

Nothing pleases a patient more than a thorough examination and nothing will advertise the office better than an intelligent examination.

Records of patients should be complete, and at subsequent visits the doctor should show himself familiar with the case and treatments should never become routine affairs.

There should be ample rooms, arranged in a suitable way for both patient and doctor; At least two treatment rooms, separated by a laboratory.

The nature of the treatment and the expected results, as well as the fees, should always be clearly explained to the patient so that he may know exactly how he stands and decide.

The great point in everything seen and done is that the patient should be made to feel that he is regarded with efficient personal attention.

Achylia in Pernicious Anemia

There seems reason to believe, on the basis of the experiments of Dr. W. B. Castle, reported in *Brit. M.J.*, June 22, 1929, and *Am. J. Med. Sc.*, Dec., 1929, that the blood symptoms, in the disease known as pernicious anemia, are secondary to the condition of achylia gastrica, which often precedes the characteristic blood findings by a considerable period of time.

Dr. Castle fed three pernicious anemia patients with 300 Gm. of fresh, raw beef, daily for ten days, without producing any change in the blood picture.

He then fed them the incubated contents of a normal human stomach, recovered one hour after the ingestion of a similar quantity of beef, and observed, within ten days, results exactly similar to those following the administration of moderate amounts of liver.

This indicates that the normal stomach secretes some substance capable of so modifying beef muscle as to render it capable of relieving pernicious anemia.

Pernicious Anemia

In *Milit. Surgeon*, for Jan., 1930, Maj. T. W. Burnett, M.C., U.S.A., summarizes the diagnosis and treatment of pernicious anemia thus:

DIAGNOSIS

The following points are the minimum to be covered:

1.—*Laboratory*: Red blood cells; hemoglobin; white blood cells; differential count; abnormal red blood cells; reticulated red cells; volume index; color index; icteric index; Van den Bergh test; free HCl; total acidity; Wassermann and Kahn tests.

2.—*Physical examination*: Look for jaundice, edema, pallor, splenic enlargement, signs of functional or organic circulatory disturbance, hepatic enlargement, gall-bladder disease, or other foci of infection, neurologic signs of combined sclerosis (combined system disease), distended abdomen, dyspnea, evening temperature increase (blood destruction?), sore tongue with glazed appearance, general appearance, and facies.

History: Should cover carefully: Chief complaints, onset and progress; weakness; dyspnea; palpitation; loss of weight and strength; gastric

disturbance; diarrhea (type); distention, tingling and numbness of extremities, with gait disturbance and other neurologic disturbances; development of sore tongue; abdominal pain; or any symptoms referable to definite foci of infection.

To be differentiated from secondary anemias, aplastic anemia, and the very rapid type of anemia sometimes occurring with acute infectious diseases and infections. Repeated examinations are required, as the disease is often difficult to diagnose. Careful charting is necessary. Syphilis or other disease may often be present to confuse the picture. Differentiate from sprue.

TREATMENT

1.—First weeks, if patient very weak, rest in bed. Always abundant fresh air.

2.—Liver, 200 Gm. daily, in 2,000-calorie, high-protein diet, as soon as the appetite is established. Liver may be prepared in many ways. Gradually increase the diet. High vitamin content is necessary.

3.—Extracts of liver, now on the market, work well and are agreeable to take. Liver extract may be given, four doses daily.

4.—Dilute HCl, 2 cc. or 1 cc., t.i.d., well diluted, should be given before meals.

5.—Attention to foci of infection is required.

6.—In recent treatment of five (5) pernicious anemia patients by the high-protein and liver, high-vitamin diet, including one patient who used the liver extract, the immediate results have been extremely satisfactory. Blood transfusions are seldom necessary except to give the patient a good start for dietary treatment.

Synergistic Analgesia in Obstetrics

Gwathmey's method of synergistic analgesia was employed by Dr. W. B. Mount, of Montclair, N. J., in 100 obstetric cases as reported in *Anesth. and Analg.*, Sept.-Oct., 1929. By this method operative interference in labor was less often necessary, and primiparae or patients with prolonged labors could be carried along in much better condition than by other methods tried. The anesthesia was taken well. After delivery the patients were in less shock and recuperated well. The so-called nervous chill following delivery was not seen and the sedative effects often persisted after delivery, so that sleep was usually obtained. The patients were relieved and quiet during labor and (not an unimportant item) the patients' relatives were better satisfied and easier to manage.

Backaches

Dr. Henry Keller, in *Hebrew Physician*, Jan., 1930, summarizes his observations on backache like this:

1.—Since a variety of causes are capable of producing backache, it is necessary for the physician to examine the patients thoroughly, in order to find the source of the trouble.

2.—In view of the fact that there are direct and indirect causes, it is self evident that a general physician is the one best trained to examine a patient impartially, and is most capable of making a tentative diagnosis.

3.—The spinal column, consisting of many vertebral bodies and many joints, is therefore more prone to suffer from the effects of any infection found in the system which is capable of producing arthritis, and, in view of the fact that it is in intimate contact with the nervous system, it is more liable to painful conditions.

4.—Treatment should not be begun until the cause of the trouble is located.

5.—In order to obtain the cooperation of the patient, it is very often necessary to instil optimism in the sufferer, or even to give a placebo, which may help to establish "confidential communion" between the patient and the physician.

Bronchography for the General Practitioner

By injecting the bronchial tree with a suitable opaque substance, its outline may be shown by a dense shadow on an x-ray film. By this method bronchiectasia and other conditions can be easily diagnosed in the office by the general practitioner without the aid of a specialist.

It is only in exceptional cases (perhaps 5 percent) that the opaque medium injected through a bronchoscope will give any evidence additional to that obtained by the simpler injection methods.

In *Canad. M. A. Jour.*, Dec., 1929, Dr. N. Bethune, of Montreal, gives the following practical notes of the routine to be followed:

1.—The crico-thyroid route should not be used for adults.

2.—Choose the bronchoscopic method for children; for suspected foreign bodies, tumors, etc., in which case the injection of iodized oil is the logical thing to do, once the bronchoscope has been used for its major purpose of visual diagnosis.

3.—Cooperation, to be obtained through education of the patient, is the secret of success.

4.—Avoid the injection of iodized oil in pulmonary tuberculosis, whether the sputum is positive or not. The only exception is in old tuberculous bronchiectasis, with negative sputum, persisting after thoracoplastic operations.

5.—Do not diagnose "active tuberculosis of the lungs" on x-ray evidence alone, without first asking the patient if he has ever had an injection of iodized oil. Although the greater quantity is usually coughed up in a few days, a small amount of oil can, not infrequently, be seen for months after. It produces no symptoms.

6.—Coughing during injection ruins all. If you cannot control the cough by better anesthesia, wait a day and alter your technic. Give a preliminary dose of morphine gr. 1/6, (.01 Gm.) and atropin, gr. 1/150, (0.45 mgm.). The cough sprays the iodized oil out of the bronchi into the alveoli. Here it is worse than useless. You desire bronchial filling, not alveolar detail.

7.—Do not be alarmed if in your early attempts iodized oil is swallowed. The oil, although broken down by the gastric juice, with liberation of iodine, appears to do no harm. An occasional case of iodism has been reported. The iodine is not liberated in the lungs.

8.—Do not expect to fill a lung abscess cavity which does not show a fluid level. If it does

show a fluid level, injection of iodized oil is unnecessary. The bronchi leading out of a cavity are frequently plugged with thick mucous secretions and pus, which only at intervals are expelled. After such periodic clearing, such a cavity may be filled with oil.

Serum Accidents

In a special report, made by Drs. G. M. Mackenzie and F. M. Hanger, of New York, at the request of the A.M.A. Council on Pharmacy and Chemistry and published in *J.A.M.A.*, Jan. 25, 1930, these authors state that several points in connection with serum accidents are well established, though not generally known. These are:

1.—Compared to the spontaneously sensitive "horse asthmatic" group, individuals sensitized by a previous serum administration are, in general, much less sensitive to horse serum.

2.—Fatal accidents have, however, occurred in both groups.

3.—Only a very small percentage of those artificially sensitized reach a dangerous degree of sensitization.

4.—In both groups, the variation in the intensity of the sensitization covers a very wide range.

5.—Minute quantities of horse serum, parenterally introduced, suffice, in an important percentage of individuals, to increase the reactivity of the individual to the horse serum administered.

6.—Serum accidents due to hypersensitiveness are avoidable.

Before using serum one should always inquire for a history of serum therapy. But in any case the safest procedure is not to inject serum without first making a skin test.

The technic of making a skin test is as follows: After the skin of the forearm has been cleansed with alcohol, a very small quantity—not more than 0.05 cc. of a 1:10 dilution of the serum—is injected into the skin. If, at the end of from 10 to 20 minutes, the injection wheal has enlarged and a zone of erythema has formed around it, the reaction should be regarded as positive. The size of the wheal and the breadth of the surrounding area of erythema give a rough measure of the degree of hypersensitivity; in strong reactions the wheal may be 3 to 4 cm. or more in diameter and may project.

In the presence of a history of symptoms from horses or a strongly positive skin test, the first injection of serum should be subcutaneous and should not exceed 0.01 cc. If no untoward symptoms occur, the dose may be doubled every 30 minutes until 1 cc. is given. Then, after the usual interval, 0.1 cc. is given intravenously. The intravenous doses may be doubled at intervals of 20 minutes until the required amount of serum has been given. If there are symptoms of serum accidents, the same dose should be repeated after an interval of half an hour or an hour. The injections should be very slow.

In case it is necessary to inject serum intraspinally, the same procedure should be followed until a dose of perhaps 10 cc. has been tolerated intravenously; then that amount may be given with caution intraspinally.

Epinephrin is highly effective in controlling the manifestations of serum accidents and should always be at hand.

Most serum accidents have occurred because desensitization was not properly carried out.

The Walcher Position in Contracted Pelvis

The Walcher position in obstetrics has been known since 1589.

In *Surg. Gynec. and Obstet.*, Dec., 1929, Dr. Julius Jarcho, of New York, states that the consensus of opinion, as stated in authoritative textbooks on obstetrics, is that the use of the Walcher position in contracted pelvic conditions lengthens the anteroposterior diameter of the inlet sufficiently to help engagement. From a careful study of the literature and observations on 7 cases, by direct measurements of the true conjugate with an obstetric inclinometer, the author finds that it would appear that this view is substantially correct.

However, several qualifications should be stated. In a minority of cases, the Walcher position may not increase the length of the conjugata vera, or may even reduce it. Also, it is necessary to bear in mind that estimations of the true conjugate from the diagonal may be misleading and what appears to be a case of relatively contracted pelvis may really be one of absolute contraction.

Nevertheless, there is no valid reason to doubt the efficacy of the Walcher position in many cases of minor degrees of pelvic contraction. Its use frequently avoids the necessity of surgical intervention.

Inflammations of the Ethmoid

In combating affections of the nasal accessory sinuses, the key situation is the ethmoid, and a knowledge of its anatomy and topographic relations is essential.

In *Practitioner*, Lond., Jan., 1930, Dr. H. Tilley remarks that extensive disease of the ethmoid may be present without giving rise to very definite symptoms. Ethmoiditis may be responsible for various apparently unrelated conditions, such as trigeminal neuralgia, chronic colds in the head, "neurasthenia," various mental disorders and diseases of the eye.

The general principle of treatment should be to provide inflamed areas with free, spontaneous and permanent drainage, whether supuration be present or not.

Large or moderate-sized polypi can be removed by the cold wire snare, under local anesthesia. When the loop is tightened up, the polypus should be pulled, rather than cut off, in order that the inflamed bone at the base of the polypus may possibly be removed at the same time. The origin of such polypi should not be cauterized by acids or the cautery and no plugging should be applied to the ethmoidal region. If it be impossible to do sufficient work with the snare, some form of ethmoidal forceps will be necessary to clear the middle meatal region.

In radical ethmoidal operations, the author adopts the following as a golden rule: Always

strive to preserve and keep in view the attachment of the middle turbinal to the "lateral mass" of cells and to work on its external aspect, whether such action leads above or below its level. This is the one and essential landmark and if—as may frequently happen—it has to be removed to gain freer access to the posterior cells, additional caution will be necessary.

Damage to the olfactory mucous membrane on the upper reaches of the septum and the medial aspect of the superior turbinal should be avoided, because the nerve expansions are here surrounded by lymphatics and infection may easily enter them.

Temporary Emotional Glycosuria

In 4 cases, reported by Dr. W. M. Johnson, of Winston-Salem, N. C., in *Southern Med. and Surg.*, Dec., 1929, a transient glycosuria was found to accompany periods of emotional excitement. These patients did not show any history of glycosuria or diabetes.

In emotional excitement there is an excess of secretion of the adrenals and, as this is antagonistic to the pancreatic secretion, it might offer the reason why there should be interference with the inhibitory effect of the pancreatic secretion upon the glycogen stored in the liver, with an excessive liberation of glucose.

Parathyroid Extract in Eclamptic States

There is reason for connecting calcium deficiency, the parathyroid secretion and eclamptic seizures. In *Surg. Gynec. and Obstet.*, Nov., 1929, Dr. R. Ernesto Lopez, of New York, reports 5 cases of more or less advanced stages of "eclampsia parturientum," in which the administration, usually of from 10 to 80 units, intramuscularly, of parathyroid extract (Collip) initiated a diuresis, usually beginning at the second or third day after injection, and which increased daily for 4 or 5 days until edema disappeared. A further injection of a smaller amount was repeated the following or a subsequent day if deemed necessary.

The subjective signs of dizziness, headaches, disturbances of vision and muscular cramps disappeared in the same ratio as the edema.

Convulsions, when present, disappeared after the first injection.

In no case was labor started by the injections; the fetal heart suffered no change; nor did the calcium in the blood serum show any appreciable increase. The dosage of parathyroid used was tentative only and exactness requires further research.

Opening the Parietal Peritoneum in Laparotomy

The following method of opening the peritoneum, which guards against injury to the bowel, is described by Dr. F. H. Lahey, of Boston, in *Surg. Gynec. and Obstet.*, Nov., 1929.

The surgeon and assistant grasp the peritoneum in two pairs of forceps, lift upon the forceps so

that the lax peritoneum is pulled into a peak and, with the blunt handle of the knife, press into close contact the two underlying moist surfaces of the peritoneum. In addition to holding the two surfaces of the peritoneum together, the knife handle as it is pushed downward presses away any underlying bowel or omentum. It will be realized that, in order to make the two peritoneal surfaces adhere, as they do by negative pressure, there must be just sufficient upward pull upon the two pairs of forceps in the hands of the surgeon and assistant to create a negative pressure but not sufficient to cause the diverging walls of the peritoneal folds to separate.

As soon as the two folds of peritoneum have been brought into contact an incision may be made in the apex of the fold without danger that a loop of bowel or a section of omentum be included in the fold.

Alleviation of Chronic Deafness

It has been suggested that the best way to get the deaf to hear is to re-educate the ears with the sound of the human voice. This is the basis of the "Electrophone" invented by Zünd-Burget, of Paris.

In *Practitioner*, Lon., Jan., 1930, Dr. G. C. Cathcart reports that he has treated 637 cases of chronic deafness by the Zünd-Burget electrophonic method. These comprised 171 cases of nerve deafness, 253 cases of chronic otitis media and 213 cases of otosclerosis. Of the 171 nerve cases, 126 (73.6 percent) were improved; 168 (66.5 percent) of the 253 cases of chronic otitis and 115 (53.9 percent) of the 213 cases of otosclerosis were also improved.

The results, according to the author, would seem to show that the electrophonic method of Zünd-Burget, properly carried out, is a substantial advance in the treatment of chronic progressive deafness. It does not cure, but it alleviates conditions regarded as hopeless. The greatest obstacle to its more general adoption is the prejudice of leading otologists.

Stramonium (Hyoscyamine) in Epidemic Encephalitis

Only slight benefit has been obtained from drugs in the sequelae of epidemic encephalitis, except in the case of the alkaloids of the *solanaceae*. In *J.A.M.A.*, Dec. 28, 1929, Drs. A. L. Jacobson and F. Epplen, of Seattle, record a number of cases, varying in degrees of severity, of postencephalitic sequelae, in which very distinct palliation of the disabling symptoms was obtained from the use of stramonium, the chief alkaloid of which is hyoscyamine. Pharmacologic textbooks give but little information regarding this drug.

The U.S.P. tincture of stramonium was employed, in doses ranging from 20 to 70 minims (1.2 cc. to 4.3 cc.), three or four times a day, administered orally and continued for months in some cases. The drug was most valuable in patients who were most affected.

According to the authors' clinical experience, in a series of hospital and private patients,

stramonium is an excellent palliative remedy for all symptoms of the parkinsonian syndrome of postencephalitic origin, with the single exception of the pareses, which remain unbenefited. It is also of value in idiopathic paralysis agitans.

Toxic manifestations—paresis of accommodation, xerostomia and nausea—are rare and seemingly evanescent.

The tincture used should preferably be fresh.

The drug apparently is valuable in quite varying types of postencephalitic sequelae.

Piña Mestre's Injection Method in Inguinal Hernia

A nonoperative method of treating hernia that offers results equal to those of hernioplasty deserves serious consideration.

In *M. J. and Record*, Jan. 15, 1930, Drs. F. Slater Jameson and J. Cantala, of New York, discuss Piña Mestre's injection method, which they have employed in 64 cases. It is a revival of an old method.

The stimulating and astringent principles used in Piña Mestre's formula are: Catechu, monesia, krameria, or rhatany, rosa canina and vaccinium myrtillus. The object is to provide closure of the hernial orifice by seroplastic exudation. It is claimed that closure is produced in from 10 to 15 days and that there are less than 1 percent of recurrences.

Regarding technic, the patient should wear constantly during treatment an efficient truss. During the injections he lies in a moderate Trendelenburg position. The needle should be from 1 1/4 to 2 inches long and 24 or 25-gage. First, 2 cc. of novocaine (procaine) are injected through the external abdominal ring into the inguinal canal or directly in the neighborhood of the internal abdominal ring. A few minutes later the same syringe is used to inject the contents of one ampoule of Piña Mestre's solution.

To locate the site of injection, the forefinger should be introduced as far as possible through the external abdominal ring and into the inguinal canal in the direction of the internal ring. The needle, guided by the invaginated forefinger, should be introduced at a point near the internal ring and the injection made as close to it as possible. The injection should be extremely slow and care should be taken to exclude all air from the syringe before making the injection.

Following injection the patient should lie still with his fingers pressed over the site of injection for 5 to 10 minutes.

As a rule the injections are given daily, unless there is pain or too much swelling. Generally twelve or more injections are required. The treatment may be considered completed when the external abdominal ring is absolutely closed and the inguinal canal obliterated by firm adhesions. Such conditions can be determined by palpation.

There are no general reactions. Of the 64 cases treated by the authors, in 60 the canal was obliterated, with permanent relief from the hernia. There were 4 recurrences, at least 2 of which were due to the patients' carelessness, and these were cured by a few further injections.

Fewer injections are necessary, as a rule, when

there has been a previous operation, and the method is very useful when there is any kind of an operative risk.

Fractures of the Carpus

A study of 25 unselected cases of fractures of the carpal bones, analyzed by Dr. H. H. Ritter, of New York, in *Surg. Gynec. and Obstet.*, Dec., 1929, shows that:

1.—The scaphoid is more often damaged than all the other carpals.

2.—Dislocation of the semilunar is frequently associated with a fracture of either the scaphoid or articular surface of the radius.

3.—Osseous union in carpal fractures is the exception; fibrous union the rule.

4.—Much of the disability following carpal injuries is due to intra-articular soft structure damage.

5.—Early attempts at closed reduction of scaphoid fractures or semilunar dislocations should be made.

6.—Failure to obtain proper reduction by closed manipulation should be followed by immediate open operation.

7.—Cases of carpal fracture, treated unsuccessfully by immobilization, should be operated upon within 3 months, lest irreparable subsequent arthritic changes take place.

8.—Carpal fractures, due to the cancellous nature of the bone, do not heal kindly, except fracture of the tubercle of the scaphoid, which is definitely osseous.

9.—No fracture or dislocation of the carpus ever exists without an associated chondritis, synovitis, and tenosynovitis.

10.—Both wrists should always be examined with the X-ray as an aid to diagnosis, but the physical findings should be the guide in judging the end-result.

Simplifying Ether Anesthesia

A simplified method of intratracheal ether anesthesia is described by Dr. P. J. Flagg, of New York, in *Anesth. and Analg.*, Sept.-Oct., 1929.

Dr. Flagg considers that intratracheal intubation by the Jackson bronchoscope, in accordance with the prescribed technique, is a comparatively simple and nontraumatic procedure.

The extratracheal portion of the standard bronchoscope has been modified to form a flexible, airtight, noncollapsible, self-retaining inhalation tube, which can be attached to the source of the ether, chloroform, nitrous oxide or whatever anesthetic is used.

The anesthetic control afforded by this adaptation approximates the ideal, which would exist if the open trachea were extended through and beyond the operative field.

The adoption of intratracheal inhalation, as prescribed, is calculated to change the complexion of operations on the upper air passages,

by reducing the customary tension and haste of these operations; by insuring full, continuous, unobstructed respiration, which results in a lowered blood pressure and the reduction of bleeding at the operative site; and by preventing the accidental aspiration of blood, vomitus, mucus, sponges, tissue and teeth, during operation, thereby protecting the patient from post-operative pulmonary abscesses.

The initial intubation is carried out under gas and ether, with laryngoscopic control, and occupies only a few seconds.

Nitrous Oxide-Oxygen Anesthesia in Dentistry

According to Dr. H. S. Ruth, of Philadelphia, in *Anesth. and Analg.*, Sept.-Oct., 1929, statistics show that 80 percent of exodontists in the United States use nitrous oxide-oxygen in 75 percent of their operative procedures. But perhaps a more forceful indication of the confidence inspired by nitrous oxide-oxygen is the fact that almost seven times as many use it instead of local anesthesia in their poor operative risks. Is it not logical that an anesthetic which is easier on a poor risk is also of greater benefit to the normal patient?

There was a preponderance of opinion among dentists that there was more postoperative pain following local anesthesia than with nitrous oxide; also that greater hemorrhage followed local anesthesia.

Infectivity and Prevention of Chicken Pox

Infectivity preceding the eruptive stage in chicken pox appears to be of short duration. In *J.A.M.A.*, Dec. 28, 1929, Drs. J. E. Gordon and F. M. Meader, of Detroit, state that, from their hospital observations and study, this period does not probably exceed 24 hours.

Infectivity during convalescence is less prolonged than is commonly considered, does not necessarily coincide with the persistence of crusted lesions, and probably ceases within 10 days.

Convalescent serum furnishes a high degree of protection, if obtained within one month of the appearance of the eruption. Obtained later, it is less efficient and, after five months, confers protection in only a third of the immunized susceptible persons. The authors obtained their serums from adult persons recently recovered from chicken pox. The blood was centrifugated and the serum from three to eight donors was pooled, passed through a Berkfeld filter and, after sterility tests over seven days, bottled in 15 cc. vials. The dosage used was 10 cc. of such serum, intramuscularly, in the thigh. The protection obtained was at the rate of 92.7 percent. If the serum is obtained more than 2 months after eruption, the dose should be increased to 15 cc.

NEW BOOKS

Draper: Constitution and Disease

DISEASE AND THE MAN. By George Draper, M.D., Associate Professor of Clinical Medicine, Columbia University. New York: The Macmillan Company. 1930. Price \$4.50.

For some years past, a number of men have devoted much time and energy to demonstrating the applicability of the facts of anthropology to the practice of medicine and the immense aid to diagnosis and the treatment of disease which may be obtained from the practice of anthropometry and anthroposcopy. Prominent among these is Dr. George Draper.

In this volume, Draper makes a cogent and convincing plea for a study of the man who is ill, rather than devoting the entire emphasis to the disease process; for consideration of the field where the pathologic process grows, as well as of the seed and the crop.

He conceives the individual constitution (the *phenotype*—the man as he presents himself) as consisting of four panels, like a folding screen: Morphology (anatomy), physiology, psychology and immunity, and enlarges upon each in turn, showing, by statistics and apt case reports, that people of certain types of physical conformation are definitely susceptible to certain disease states, so that a keen physician can, after observing a patient closely and asking a few questions about his personal and family history, form a sound idea of the sort of morbid process which is likely to be going on. There are, in fact, gastric ulcer types, gall-bladder types, pernicious anemia types, etc.

Among many helpful things, the detailed scheme for studying the "psychologic panel" and the careful description of the manner of conducting the "Constitution Clinic" at Columbia University stand out prominently.

The book is written in the elegant, but easy and flowing style with which the readers of the author's earlier publications are familiar, and is pertinently illustrated by a number of photographs and diagrams which clinch the points he is making. To say that it is as fascinating as a novel is to do it an injustice. No physician who truly loves the actual practice of medicine would lay it aside for any story that ever was written.

One has the feeling, after a perusal of this work, that no medical man who is unfamiliar with Draper's point of view is adequately prepared for practice, and that no medical library will be complete without a well-thumbed copy of this volume.

Cowdry: Human Biology and Racial Welfare

HUMAN BIOLOGY AND RACIAL WELFARE. By 27 Contributors. Edited by Edmund V. Cowdry, Professor of Cytology, Washington University, St. Louis. With an Introduction by Edwin R. Embree. Illustrated. New York: Paul B. Hoeber, Inc. 1930. Price \$6.00.

Many special sciences—paleontology, chemistry, geology, physiology, social economics, biochemistry, etc.—contribute their quotas to the rather indefinite concept, "human biology." The present book, which is made up of the contributions of 27 scientists in specialized fields, is an attempt to correlate the known scientific facts and hypotheses, in so far as they bear upon the problem of human life and its intricacies, in the past, present and, so far as may be scientifically presumed, in the future.

There are five main parts: Part I deals with life generally, in space and time; Part II takes up the origin of man and his evolutionary and racial progress; Part III discusses man as a physiologic unit; in Part IV, the effects of human environment as modifying life and its phenomena are enquired into. This covers such matters as food, medicine, education and crime; In Part V, a prognosis of the future life of man is given.

In regard to human life, its aims, purposes and mysteries, there is more cock-sure ignorance displayed, by the average run of people who are considered intelligent, than on any other subject. We shape our "scientific" opinions greatly from newspapers and popular writers, but rarely do we consult the scientific authorities themselves, to test the accuracy or otherwise of the opinions we cherish so dearly.

Here we have the opinions of the scientists themselves, applied to the various aspects of life. They are not always satisfying; they leave many things untold which we would much like to know; they assume far too many things, at times, that a thinker will not grant, even though they fit in with a hypothesis; sometimes one will smile at the naiveté with which a stupendous assertion is made without reliable premises but, on the whole, we get the real scientific view and a correlation of such scientific data as is available to help us to put together the pieces of the puzzle of human biology.

The book is one that should appeal to all intelligent thinkers, for there are those who are intelligent and who do not think, or who too easily accept the pabulum offered to their brain without enquiring as to its mental digestibility.

Merck's Index

MERCK'S INDEX. *An Encyclopedia for the Chemist, Pharmacist and Physician, Giving the Chemicals and Drugs Used in Chemistry, Medicine and the Arts. With an Appendix Containing Tables, Abbreviations, Etc. Fourth Edition.* Rahway, N. J.: Merck & Co., Inc. 1930. Price \$5.00 (with 50 percent discount to members of and those affiliated with the Medical, Chemical, Pharmaceutical and allied professions).

Merck's Index is a vade mecum for the chemist, pharmacist and, to a great extent, for the physician. This is the fourth American edition, the third edition having been published in 1907 and subsequent editions having been interfered with by the World War and other conditions.

The present work is the result of a thorough overhauling; all new materials necessary have been included. As it now stands, it is a condensed, comprehensive and reliable encyclopedia of drugs and chemicals, arranged alphabetically, so that immediate information on such matters may be obtained by him who needs it.

Physicians, pharmacists, chemists and others engaged in similar lines of work will be pleased to see this new edition of the Index, which has been eagerly awaited by many.

Fraser: Trauma, Disease, Compensation

TRAUMA, DISEASE, COMPENSATION. *A Handbook of Their Medico-Legal Relations.* By A. J. Fraser, M.D., Chief Medical Officer, Workmen's Compensation Board, Winnipeg. Philadelphia: F. A. Davis Company. 1930. Price \$6.50.

Medical problems arising out of claims for compensation for industrial and other injuries come in the way of physicians and surgeons every day.

Dr. Fraser writes with the experience of twelve years service as chief medical officer of the Workmen's Compensation Board of Manitoba, in which capacity he has advised in thousands of injury cases. His book treats of injuries to various regions and organs, and especially of the possibilities of permanent or partial incapacitation from such injuries or their effects by directly or indirectly arousing latent conditions which may incapacitate. This phase of the remote contingencies of injuries is one of the most difficult to deal with and the diagnostic data in evaluating the results of trauma are well dealt with in this volume.

The work is essentially a compilation. The opinions of various authorities, as expressed in literature and legal trials, are quoted and these form the criteria by which any physician, called upon to testify in a given case, must be guided, at least to a great extent. Dr. Fraser believes that his book will be valuable to the rank and file of the profession who have not had the necessary experience or opportunities of training regarding the special medicolegal points that arise in compensation claims and who find themselves, consequently, unable to cope with clever lawyers.

The data offered here should be of great assistance to physicians in evaluating genuine and just claims for traumatic incapacity, as opposed to the compensation seeker of the "railroad spine" type.

The work should be of special value to physicians or surgeons engaged in industrial work, but it is one that most doctors will find very useful to have available.

McPheeters: Varicose Veins

VARICOSE VEINS. *With Special Reference To The Injection Treatment.* By H. O. McPheeters, M.D., F.A.C.S., Director of the Varicose Vein and Ulcer Clinic, Minneapolis General Hospital; Attending Physician New Asbury, Fairview, and Northwestern Hospitals, Minneapolis, Minn. Illustrated With Half-Tone and Line Engravings. Second Revised and Enlarged Edition. Philadelphia: F. A. Davis Company. 1930. Price \$3.50.

The first edition of Dr. McPheeter's book on the injection method of treatment of varicose veins and varicose ulcers was reviewed in CLINICAL MEDICINE AND SURGERY, Nov. 1929, p. 851.

The fact that a second edition is now printed is evidence of the need for such a book and that it fulfilled its purpose.

In this second edition Dr. McPheeters gives a more detailed account of some points that were not quite clearly put in the first edition; also the further progress of the method, especially the pathologic results of injections, is recorded.

Keeler: Modern Otology

MODERN OTOTOLOGY. By Joseph Clarence Keeler, M.D., F.A.C.S., Associate Professor of Otology, Jefferson Medical College; Otolaryngologist, Germantown Hospital; Consulting Otolaryngologist, Pottstown Hospital, Pottstown, Pa., and Newcomb Hospital, Vineland, N. J., Fellow of The American College of Surgeons; etc. 90 Original Illustrations and 15 Colored Plates. Philadelphia: F. A. Davis Company. 1930. Price \$10.00.

The author of this new textbook on otology feels that his clinical and pedagogic experience of more than 25 years, together with his consciousness of many drawbacks in the manuals of otology now available, act as a sufficient urge and reason for the task.

The volume succinctly covers the complete practice of modern otology. There are 12 parts, in the following order: Anatomic and physiologic considerations; aural examination; deformities and diseases of the external ear; diseases of the membrana tympani; the eustachian tube; diseases of the middle ear; affections of the mastoid; intracranial complications of aural disease; diseases of the internal ear; otosclerosis and chronic progressive deafness; otology in children; and medico-legal aspects of otology.

Methods of evaluation of symptoms and diagnosis, as presented here, are particularly valuable. Treatment is often based on the author's personal experience and, in some cases, departs

from standardized procedures. The sections dealing with diseases of the middle ear and mastoid affections call for particular commendation.

Otologists will find that this work discusses the latest contributions to otology. The general practitioner who wants a good, general work on this subject will find this one that will suit him, as its style is not too technically specialist.

The book is well and clearly printed and it is embellished by numerous good illustrations, which tell their story.

Hay: The Neck

THE NECK. A Roentgenological Study of the Soft Tissues. Consideration of the Normal and Pathological. By Percy D. Day, Jr., M.D., Roentgenologist of The McLeod Infirmary, Florence, S. C., etc. Introduction by Henry K. Pancoast, M.D., Professor of Roentgenology, University of Pennsylvania, Philadelphia. Sixty-Six Roentgen-Ray Studies. Volume Nine of "Annals of Roentgenology." Edited by James T. Case, M.D., Ex-President of The American Roentgen Ray Society. New York: Paul B. Hoeber, Inc. 1930. Price \$8.00.

This forms volume 9 of the *Annals of Roentgenology*—a series of monographic atlases embodying the diagnostic value of roentgenograms of various regions of the body.

The purpose of the present book is to present the author's interpretation of the soft tissues of the normal neck and to demonstrate the various pathologic alterations encountered—thyroid disease, malignancy, tuberculosis, foreign bodies, etc.

These monographs are not especially intended for the roentgen specialist, but rather for the clinician who has to evaluate the roentgenogram with other clinical evidence in arriving at a diagnosis. With such aid the clinician is more or less independent of the technician's interpretation.

The general excellence of the make-up of these monographs has already been mentioned when reviewing volume X (See *CLINICAL MEDICINE AND SURGERY*, April, 1930, p. 325) and the remarks then made apply equally to this volume.

Practical Medicine Series: Pediatrics

THE PRACTICAL MEDICINE SERIES. Comprising Eight Volumes on the Year's Progress in Medicine and Surgery. Pediatrics. Edited by Isaac A. Abt, M.D., Professor of Pediatrics, Northwestern University Medical School, Attending Physician St. Luke's Hospital, Chicago, Children's Department. With the Collaboration of Arthur F. Abt, M.D., Assistant in Pediatrics, Northwestern University Medical School, etc. Series 1929. Chicago: The Year Book Publishers, 304 So. Dearborn St. Price \$2.25.

This is an admirable resumé of the pediatric literature for the year 1929 summing up the contributions appearing, not only in the American, but also in the principal foreign journals.

The busy practitioner has here presented to him what has been advanced by leading clinicians everywhere on the different disease com-

plexes which affect children, the book being divided into such sections. Not the least in value are the guiding criticisms of the experienced editor, which are plentifully distributed throughout the volume.

Berman: Nursing in Emergencies

NURSING IN EMERGENCIES. By Jacob K. Berman, A.B., M.D., F.A.C.S., Assistant in Surgery Indiana University School of Medicine, Surgical Staffs of Indianapolis City, Methodist, and St. Vincent's Hospital, etc. With One Hundred Nine Illustrations. St. Louis: The C. V. Mosby Company. 1929. Price \$2.25.

Though short, this is really a very excellent piece of work which should be in the hands of every nurse.

Just exactly what should be done in certain emergencies is here laid down very succinctly and illustrated in such manner that it is easily grasped. The nurse plays an important part in the treatment of emergencies and often, even in the hospital, there are emergencies which must be dealt with instantly and which cannot wait for the few minutes till a doctor is available.

This little book is the result of a course of lectures given on the subject in the Indianapolis City Hospital during the past four years.

Oxford Monographs: Blood, Blood Pressure and Liver

OXFORD MONOGRAPHS ON DIAGNOSIS AND TREATMENT. Edited by Henry A. Christian, M.D., Sc.D., LL.D. Volume VII, The Diagnosis and Treatment of Variations in Blood Pressure and Nephritis. By Herman O. Mosenthal, M.D., Professor of Medicine and Attending Physician, New York Post-Graduate Medical School and Hospital, New York, N. Y. Volume VIII, The Diagnosis and Treatment of Diseases of the Liver and Biliary Tract. By John Phillips, M.D., Chief of Medical Division, The Cleveland Clinic, Cleveland, Ohio. Volume IX, The Diagnosis and Treatment of Diseases of the Blood. By Thomas Ordway, M.D., Dean and Associate Professor of Medicine, Albany Medical College, etc. And L. Whittington Gorham, M.D., Clinical Professor of Medicine, Albany Medical College, etc. New York: Oxford University Press. 1929, 1930. Price, complete set of ten volumes, \$100.00.

The volumes which are comprised in this series have been written with the view of providing the practitioner with comprehensive discussions of diagnosis and treatment, by men who are competent to select what is best.

Volume VII, on "The Diagnosis and Treatment of Variations in Blood Pressure and Nephritis," is written by Dr. H. O. Mosenthal, of New York, and covers normal and abnormal conditions of arterial and venous pressure, with the causes and treatment of the latter. The condition known as "essential" hypertension is also treated at length in a special chapter.

Volume VIII, on "The Diagnosis and Treatment of Diseases of the Liver and Biliary Tract," is written by Dr. John Phillips, of Cleve-

land. There are three main parts devoted, respectively, to the symptomatology, differential tests and treatment of diseases of the liver, of the biliary ducts and of the gall-bladder. There are illustrations, some in color, to elucidate the text where necessary.

Volume IX, dealing with "The Diagnosis and Treatment of Diseases of The Blood," is written by Drs. Thos. Ordway and L. W. Gorham, of Albany, N. Y. There are 25 chapters devoted to the anemias, leukemias, polycythemia and other particular disease complexes. In contradistinction to the previous volumes, the diagnostic procedures here are, to a great extent, dependent on laboratory methods, although physical and other clinical methods of examination are fully dealt with. Where necessary there are colored plates to illustrate the microscopic appearance of the blood in the different conditions.

There is a special chapter, written by Drs. Blackfan, Baty and Diamond, devoted to the anemias of childhood.

We consider that these three volumes are fully up to the high standard of previous volumes of this series which we have already reviewed and that they should prove of great value to practitioners, in the differential diagnosis and treatment of diseases of the organs dealt with.

The books are issued in the loose-leaf form so that additional information may be inserted, as it is issued by the publishers.

Warthin: A Biologist's Creed

THE CREED OF A BIOLOGIST. A Biologic Philosophy of Life. By Aldred Scott Warthin, Ph.D., M.D., LL.D., Professor of Pathology and Director of the Pathological Laboratories in the University of Michigan, Ann Arbor. New York: Paul B. Hoeber, Inc. 1930. Price \$1.50.

"The human mind demands a scheme of living," and the ripe and penetrating intellect of the distinguished author of this little volume has set out, after many years of keen thinking, thirty-nine of which have been spent in active and inspiring teaching, to tell us what a biologist considers to be the purpose and goal of human life.

He says that he has found peace and a reason for our being here in the fact that the germ-plasm is potentially immortal (though he sees no reason to believe that anything else is), and that the preparation for reproduction, in the very large sense in which he perceives that preparation, and the rearing of children is sufficient occupation for a man and woman to occupy the traditional three score years and ten.

Dr. Warthin has a glimpse, now and then, of superphysical powers and purposes, but he refuses to look at such things, because they cannot be weighed and measured with the clumsy, physical instruments, of which many men of science are so proud.

Although built upon a materialistic basis, the philosophy he offers to us is clearly and beautifully expressed and rises to heights which speculations so based rarely attain. As a long-time teacher, he is, by force of necessity, somewhat dogmatic, and those who have permitted their visions and experiments to go beyond the strictly

physical plane will feel that he has almost—but not quite—seen through the tenuous veil that covers, though it does not wholly conceal, the eternal verities.

As the mature expression of one of the most independent and virile minds of this medical generation, the book is entitled to the respectful consideration of all thoughtful physicians, as well as many others of the "thinking few," but it does not, for all such persons, ring with the clear tone of the "last word."

Warthin's philosophy is set forth, with the power and polish of an epigram, in this

CREDO

I believe in the Law;

In the immortality of the germ plasm and in the creative, progressive evolution of life; in the variability of value of the germ plasm through heredity and environment; in the transmission of acquired characters; and in the conscious improvement of the race through the laws of volitive eugenics.

I believe that the aim of the individual life is the protection, improvement and continuation of the immortal germ plasm, and that this is best secured by self-development in the highest possible degree, through a permanent, monogamic sex-partnership, with limitation of offspring towards the securing of the best possible results in the progeny, and their best preparation for the continuation of the process in the next generation. In this belief, the universe is rationalized for my intelligence and reason. I accept it with optimism, relinquishing all desire for a personal immortality, and, unafraid, believing that, whatever gods may be, the game of life will have been played squarely and according to the law.

Harris & Finesilver: Normal Facts in Diagnosis

NORMAL FACTS IN DIAGNOSIS. By M. Coleman Harris, M.D., Lecturer on Physical Diagnosis, New York Homeopathic Medical College and Flower Hospital; etc., and Benjamin Finesilver, M.D., Lecturer on Diseases of The Nervous System, New York Homeopathic Medical College and Flower Hospital; etc. Illustrated With Forty-Two Engravings. Some in Colors. Philadelphia: F. A. Davis Company. 1930. Price \$2.50.

This book has been designed by the authors as an aid in recognizing the abnormal by being familiar with the normal. They consider that, in elementary classes, pathologic findings are so intermingled with the normal that it is extremely difficult for students to differentiate the latter. Without being familiar with normal conditions, it is almost impossible to recognize those that are abnormal.

The facts dealt with are mainly those of physical determination in the various regions of the body; but the usual normal laboratory findings and the tests employed are considered in a special chapter.

Ample illustrations throughout the text facilitate the descriptions.

The volume is a concise and handy epitome of essential knowledge which every student of medicine (and, for that matter, every practitioner) should have or must acquire in his practice.

Henderson & Gillespie: Psychiatry

A TEXT-BOOK OF PSYCHIATRY. For Students and Practitioners. By D. K. Henderson, M.D., (Edin.), F.R.F.P.S. (Glas.), Physician-Superintendent, The Glasgow Royal Mental Hospital; Lecturer in Psychological Medicine, University of Glasgow; etc.; and R. D. Gillespie, M.D., (Glas.), M.R.C.P., D.P.M. (Lond.), Physician For Psychological Medicine, Guy's Hospital, London; Lecturer in Psychological Medicine, Guy's Hospital Medical School; etc. Second Edition. New York: Humphrey Milford, Oxford University Press. 1930. Price \$5.50.

The author's presentation of psychiatry has apparently been greatly influenced by the biologic concept of his subject by Adolf Meyer and his followers, of the American school, which regards mental illness as the cumulative result of unhealthy reactions of the individual mind to its environment and seeks to trace, in a given case, all the factors that go to the production of these reactions.

It follows from this that much mental disease has an environmental basis and the elucidation of the conditions, as well as prophylaxis and treatment should, as in physical diseases, come, to a great extent, within the purview of the general practitioner, and mental disease must, in the majority of cases, be regarded as an individual affair and the particular patient's problems and reactions studied.

A feature of this work that will be pleasing to psychiatrists and general practitioners is its richness in case reports and clinical material. The authors are not dogmatic in their criticisms of these cases.

There are 17 chapters which deal with the generalities and particularities of the recognized psychoses—manic-depressive, schizophrenic, paranoid, psychoneuroses, etc.

While, in its general aspects, the book, so far as we can see, does not add anything essential to what American psychiatrists have already made available in our own literature, yet the clinical material included in it and the discussions and deductions of the authors regarding them make the volume one that should be on the shelves of the physician concerned with mental diseases and borderline states, including the practitioner.

Sansum: The Normal Diet

THE NORMAL DIET. A Simple Statement of the Fundamental Principles of Diet For The Mutual Use Of Physicians And Patients. By W. D. Sansum, M.S., M.D., F.A.C.P., Director of The Potter Metabolic Clinic, Department of Metabolism, Santa Barbara Cottage Hospital, Santa Barbara, California. Third Revised Edition. St. Louis: The C. V. Mosby Company. 1930. Price \$1.50.

The substance of the subject matter of this book is the advice which the author has been

giving for many years to his patients with nutritional disorders.

The nine chapters discuss the fundamental principles underlying the selection of a normal diet and the author believes that a simple statement of these principles will fill a definite need, as dietary errors are responsible for many ailments, minor as well as serious.

The language is simple and the book is one that physicians may commend to their patients, either as a guide for a sane diet or as a therapeutic mentor.

Piney & Wyard: Atlas of Blood Diseases

CLINICAL ATLAS OF BLOOD DISEASES. By A. Piney, M.D., M.R.C.P., Research Pathologist, Cancer Hospital, London, Consulting Pathologist, Chelmsford Hospital, and Stanley Wyard, M.D., M.R.C.P., Physician, Bolingbroke Hospital, and Assistant Physician, Cancer Hospital, London. With 36 Illustrations, 32 in Color. Philadelphia: P. Blakiston's Son & Co., Inc., 1012 Walnut Street, 1930. Price \$4.00.

In a great many conditions of everyday practice, a microscopic examination of the blood is a necessity and very often clinches the clinical diagnosis.

This little book is, we consider, an excellent manual of hematology for the general practitioner. In the regular blood diseases the text is sufficiently lucid and the reproduction of the blood pictures clear enough so that a diagnosis should generally be accurate. Inversely, any ordinary blood picture which may present itself to the practitioner ought to be identified with some homologue given here.

Every practitioner of medicine today must avail himself of certain laboratory methods; hematology is one of them and this is an excellent, even though brief, exposition of this branch of medical diagnosis.

Levinsohn: Lust's "Children's Diseases"

THE TREATMENT OF CHILDREN'S DISEASES. With Special Formulas and Drugs for Childhood, and a Short Diagnostic Summary of Each Clinical Picture. By Prof. Dr. F. Lust, Director of the Children's Hospital, Karlsruhe. Authorized Translation of the Sixth German Edition with Additions by Sandor A. Levinsohn, M.D., Associate Pediatrician to the Barnert Hospital, Patterson, N. J., Attending Physician to the Daughters of Miriam Orphan Asylum, Clifton, N. J. Philadelphia and London: J. B. Lippincott Company. 1930. Price \$7.00.

In Professor Lust's "Treatment of Children's Diseases," of the sixth edition of which this is an authorized English translation, the emphasis is laid on treatment, as intimated in the title, and, as a book devoted to those methods of therapy of particular diseases which the author found most reliable, it has a special value to clinical pediatricians.

Following the usual introductory general chapters, the various diseases of childhood are dealt

with, each introduced by a short diagnostic summary which recapitulates the salient features of the clinical picture.

The translator has made such changes in the original text as are necessary to make it conform to recognized American methods of practice, nomenclature, dosage, etc.

The book was originally compiled from lectures delivered by the author at the Heidelberg Clinic and in the succeeding editions it has been supplemented and expanded from the author's experience as Director of The Children's Hospital at Karlsruhe.

In the list of drugs recommended, on the author's experience, for the treatment of bronchitis and respiratory tract troubles we notice Calcidin, showing that American pharmaceuticals have not been overlooked.

Few textbooks of pediatrics give elaborate details of therapy, and this may be recommended to pediatricists and general practitioners who desire a high-class work, devoted particularly to this aspect of the subject.

Powell: Personality

WHAT IS PERSONALITY? A Brief Exposition of the Teachings of Modern Theosophy on the Subject. By Lieut.-Colonel Arthur E. Powell, Royal Engineers (Reserve of Officers). London: Besant & Co., Ltd. 1929. (Through the Theosophical Press, Wheaton, Ill.) Price \$0.60.

The question, "What is personality, and how long does it last?" has been asked insistently by thoughtful men for generations.

In this small book, Colonel Powell has set forth, briefly and clearly, the sound reasons for believing that the personality is a good deal more than merely the physical body, and that it continues to exist after that change of condition which we call death. He begins by stating the arguments of those who take the contradictory position, and proceeds to show that they are untenable, when considered deeply and rationally.

The greater part of the text is concerned with the consideration of the structure of the personality, and chapters are devoted to the vital, the feeling, the thinking and the immortal personalities. Two diagrams are introduced to clarify certain points.

Those who are at all interested in man's constitution, as understood by the students of occultism, will find this a simple and pleasingly written exposition of the subject, which will furnish material for a good deal of serious thought.

Haggard: Devils, Drugs and Doctors

DEVILS, DRUGS, AND DOCTORS. The Story of the Science of Healing from Medicine-Man to Doctor. By Howard W. Haggard, M.D., Associate Professor of Applied Physiology, Yale University, Author of "The Science of Health and Disease." With Many Illustrations from Original Sources. New York and London: Harper & Brothers, Publishers. 1929. Price \$5.00.

The story of the progress of the art and science of medicine has been told from time to time in a great many books and in a great many tongues.

Dr. Haggard tells it again in a very fascinating and scholarly, yet popular, way and illustrates the salient points by pictures from rare old engravings and woodcuts, some of which are familiar to those who have gone rather fully into the history of medicine; but all of which are rather astonishing to those who have not pursued such studies.

The work is divided into six parts as follows: The Conquest of Death at Birth; The Story of Anesthesia; The Progress of Surgery; The Passing of Plague and Pestilence; The Healing Art; Medicine Through the Ages. The story of the evolution of present-day medicine through these channels is presented concisely and yet in a style as intriguing as a novel.

The physician who is not already familiar with the main points in the history of medical practice will find them presented here in an entertaining way and sufficiently fully for a general knowledge. But the book is intended more for lay readers and is one that should be very suitable for the reception-room table, as it may be opened at random and an attractive page always found, which, at the same time will convey real information about the early horrors through which Medicine has passed.

Jorgenson: Circle of Vengeance

THE CIRCLE OF VENGEANCE. By Nora and George E. Jorgenson. New York and London: D. Appleton & Company. 1930. Price \$2.00.

This book holds two points of interest for medical men: It was written by a doctor and his wife; and the plot hinges upon a perverted use of a knowledge of bacteriology. The characters are not especially lifelike, but the situation is a decidedly unusual, if not a wholly new one, in fiction, and the masculine co-author shows his knowledge of scientific matters in almost every chapter. The story is not unduly long and will furnish several hours of pleasant relaxation.

Kraetzer: Examination of the Lungs

PROCEDURE IN EXAMINATION OF THE LUNGS. With Especial Reference to the Diagnosis of Tuberculosis. By Arthur F. Kraetzer, M.D., Chief, Medical Department, New York Skin and Cancer Hospital; Instructor in Medicine, Cornell University; Formerly, Chief Tuberculosis Out-Patient Department, Bellevue Hospital, and Assistant Adjunct Attending, Tuberculosis Service, Bellevue Hospital. With a Foreword by James Alexander Miller, M.D. New York: Oxford University Press. 1930. Price \$2.00.

The early detection of pulmonary tuberculosis is most important, considering the natural history of the disease and its therapeutics. Few practitioners have a well systematized procedure in their examinations for pulmonary tuberculosis and for its precise differentiation from other conditions frequently encountered in the thoracic cavity.

The author outlines a complete diagnostic method, especially percussion and auscultation. His procedure is entirely physical, and it should be easily followed by any practitioner or by the

medical student who desires a correct introduction to the technic of physical examination and diagnosis of lung diseases.

This or some similar book should be in every physician's library, and should be carefully studied.

De Schweinitz: Growing Up

GROWING UP. *The Story of How We Become Alive, Are Born and Grow Up.* By Karl de Schweinitz. New York: The Macmillan Company. 1930. Price \$1.75.

Every physician is asked, many times, by the parents of young children, "How shall I present the facts of sex to my little ones?" Here is a well-nigh perfect answer.

Many books have been written along this line. Some are worse than nothing, and most of the others are so hazy and symbolic in their presentation that the child is as much in the dark as ever. This is the first book we have seen in which the whole story is told, simply, directly and beautifully.

The make-up of the volume is such that a child who can read will study it with enthusiasm. The type is large and there are many fascinating illustrations. The mother can read it to younger children and explain the pictures.

Any physician can cordially recommend this little story to young parents, or give a copy to the prospective mothers under his care.

Gillespie: Sleep

SLEEP. *And the Treatment of Its Disorders.* By R. D. Gillespie, M.D., M.R.C.P., D.P.M., Physician and Lecturer in Psychological Medicine, Guy's Hospital, London; Formerly McGunn Research Scholar in Physiology in the University of Glasgow. New York: William Wood and Company. 1930. Price \$3.25.

Sleep is a common phenomenon of animal life, just as metabolism and the sexual function are common phenomena. But, although the bibliography of the latter has grown to be enormous, the number of medical books devoted to sleep and its variants is comparatively very small. Hence such a book as this one by Dr. Gillespie should be welcomed by the medical profession.

The monograph deals with the physiology and pathophysiology of sleep, with the effects of sleeplessness and other pathologic aspects of sleep, and with their treatment. The final chapter discusses the theories of the nature of sleep.

The most important matters for the general practitioner are those dealing with insomnia. It is rather startling to find that extremely prolonged periods of sleeplessness are apparently fully relieved by even one short period of sleep and that there are, so far as is known, none but trifling physical or mental changes after prolonged insomnia, although there are important subjective symptoms. The old idea that continuous suffer-

ing from insomnia led to mental deterioration does not seem to have any clinical foundation in fact.

The author's handling of the use of hypnotics is good and will repay study. A distinction is made between the use of hypnotics for insomnia and for the psychoses.

This book should prove entertaining and instructive for any medical man.

Stuart-Low: Nasal Catarrh

NASAL CATARRH. By W. Stuart-Low, F.R.C.S. (Eng.), Consulting Surgeon to the Central London Throat, Nose, and Ear Hospital; Lecturer on Rhinology, Medical Graduates' College, London; Fellow of the Royal Society of Medicine. With Illustrations. London: H. K. Lewis & Company, Ltd. 1930. Price 5 Shillings. (\$1.25).

The author of this little monograph is convinced, after many years of study, that nasal obstruction is the underlying factor in chronic nasal catarrh and many other diseases of the nose. The spreading of "colds" is due to individuals who constantly suffer from catarrh due to nasal obstruction.

In the 9 chapters which are comprised in the book, the evolution of nasal obstruction is followed and the treatment, which is usually submucous resection, is described. The style is simple and of a popular kind, so that its usefulness is not confined to rhinologists.

Norris: Uterine Tumors

UTERINE TUMORS. By Charles C. Norris, M.D., Professor of Gynecology and Obstetrics and Director of the Department, University of Pennsylvania; Gynecologist and Obstetrician, Hospital of the University of Pennsylvania, etc. One of Harper's Medical Monographs. New York and London: Harper & Brothers. 1930. Price \$3.00.

The Harper Medical Monographs take up special subjects and discuss them in detail, for the benefit of the general practitioner, so that he may be thoroughly informed on the salient point in diagnosis and treatment.

The present volume covers the important topic of uterine tumors. Chapters are devoted to cervical polyps, carcinoma and other malignant tumors of the cervix, carcinoma of the body of the uterus, myoma uteri, sarcoma and allied tumors of the uterus and tumors of the chorion. Diagnosis is specially emphasized.

Copious bibliographic references are provided at the end of each chapter, for those who wish to make a more extensive research on the matters dealt with.

General practitioners, on whom the early responsibility for the detection of uterine tumors generally falls, will find a book such as this, which gives the symptomatology and differential diagnostic points, one of great value to them.

MEDICAL NEWS



Rijks Museum, Amsterdam
Gabriel Metsu: Het Zieke Kind

Medical Pictures

The old Dutch artists were rather fond of painting medical subjects, and many of these pictures are of historical interest, as showing some of the medical practices of that time.

The Chemisch-Pharmazeutische A. G. Bad Hamburg, Frankfurt am Main, Germany, has made excellent reproductions of some of these famous paintings and, we believe, would be glad to send them to American physicians. Address requests to Mr. Arthur Abelmann, in care of the company.

The rare chance to receive pay for a medical article is offered on page 6 of the January, 1930, CLIN. MED. AND SURG.

Physical Therapy in Los Angeles

Physicians on the West Coast will have an opportunity for instruction in physical therapy during the week of June 9 to 14,

inclusive, when the sessions of the Western School of Physical Therapy and the Pacific Physical Therapy Association will be held in Los Angeles, Calif.

Full particulars may be obtained from Dr. Charles Wood Fassett, 506 Detwiler Bldg., Los Angeles.

The young doctor has a chance to show his mettle. Read the editorial on page 6, CLIN. MED. AND SURG. for January, 1930.

Portable Talkie Machine

Moving pictures already hold a large and permanent place in medical education, but the talking medical picture, which has been shown at several of the society meetings, as something of a curiosity, has required such elaborate apparatus that its usefulness seemed limited.

Now, however, the resourceful purveyors of scientific machinery have produced a portable talkie machine which can be set up anywhere and operated from an electric light socket. This will bring the most competent medical and surgical teachers within the reach of physicians, even in the most remote districts.

If you missed the prize offers on page 6 of the January CLIN. MED. AND SURG., look them up or write for particulars.

European Course in Eye, Ear, Nose and Throat Work

The ninth European postgraduate course in otolaryngology and ophthalmology will be given in Vienna, Austria, this summer, under the direction of Dr. George W. Mackenzie. The party will leave New York, June 14, returning August 18.

Full particulars may be obtained by writing to Dr. Mackenzie at 1724 Spruce St., Philadelphia, Pa.

Opening in South Carolina

Early in the year it was reported that Fountain Inn, South Carolina, was badly in need of a physician, as two men were trying to do the work that had always required four.

This need may have been filled ere this, but it sounded like an interesting opening, and those who would like to hear more may write to The Editor, *Fountain Inn Tribune*.

The rare chance to receive pay for a medical article is offered on page 6 of the January, 1930, CLIN. MED. AND SURG.

U. S. Civil Service Examinations

The United States Civil Service Commission announces the following open competitive examinations:

Associate Pharmacologist

Dietitian

Applications for dietitian and associate pharmacologist must be on file with the Civil Service Commission at Washington, D. C., not later than May 21, 1930.

Social Worker (Psychiatric)

Junior Social Worker

Chief Nurse (Indian Service)

Head Nurse (Indian Service)

Graduate Nurse (Various Services)

Graduate Nurse, Visiting Duty
(Various Services)

Graduate Nurse, Junior Grade
(Various Services)

Applications for the above-named positions will be rated as received by the Civil Service Commission at Washington, D. C., until June 30.

Full information may be obtained from the United States Civil Service Commission at Washington, D. C., or the Secretary of the United States Civil Service Board of Examiners at the post office or customhouse in any city.

Prevention of Blindness

The League of Red Cross Societies is planning a campaign, on a world-wide scale, in connection with blindness, in cooperation with the American Society for the Prevention of Blindness and with scientific societies and health organizations. An international organization has been founded, to study the many problems involved in the prophylaxis of loss of vision and to give wide publicity to the findings obtained, so as to arouse public opinion to the point of active cooperation.

The Cost of Health

The problem of the cost of adequate health service is occupying many of the keenest minds in the country just now.

To this study the *Survey Graphic* has made a decided contribution by devoting its entire January, 1930, number to a presentation of the various aspects of the question, not by physicians alone, but by business men, economists and other clear-thinking laymen.

Physicians will do well to procure a copy of this special issue, peruse it carefully and file it for future reference.

The prize offers on page 6 of the January CLIN. MED. AND SURG. are worth studying.

Hebrew Medical Journal

The second issue of *The Hebrew Physician* (Harofeh Hoibri), the only Hebrew medical journal published outside of Palestine, has just made its appearance.

This issue contains numerous articles on general medical subjects, including a copy of the manuscript on "Hemorrhoids," by Shlomo Eben Ayub, of Badrash, France, (1265 A.D.).

All physicians who are interested in this journal, are requested to communicate with The Hebrew Physician, 983 Park Avenue, New York City.

Send For This Literature

To assist doctors in obtaining current literature published by manufacturers of equipment, pharmaceuticals, physician's supplies, foods, etc., CLINICAL MEDICINE and SURGERY, North Chicago, Ill., will gladly forward request for such catalogues, booklets, reprints, etc., as are listed from month to month in this department. Some of the material now available in printed form is shown below, each piece being given a key number. For convenience in ordering, our readers may use these numbers and simply send requests to this magazine. Our aim is

to recommend only current literature which meets the standards of this paper as to reliability and adaptability for physicians' use.

Both the literature listed below and the service are free. In addition to this, we will gladly furnish such other information as you may desire regarding additional equipment or medical supplies. Make use of this department.

When requesting literature, please specify whether you are a doctor of medicine, dentist, medical student, a registered pharmacist, or a nurse.

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| C- 2 | Your Prestige and Profit. 8-page booklet. The Carroll Dunham Smith Pharmaceutical Co. | C-196 | "Facts Worth Knowing. Intravenous Products Co. of America, Inc. |
| C- 3 | Storm Binder and Abdominal Supporter. 4-page folder by Dr. Katherine L. Storm. | C-244 | I Am Oxiphen! Pitman-Moore Co. |
| C- 5 | Ethical Medicinal Specialities. 8-page booklet. A. H. Robins Co. | C-256 | The Modern Way of Giving Digitalis. Upsher Smith Co. |
| C- 17 | An Index of Treatment. Burnham Soluble Iodine Co. | C-258 | Prophylaxis. August E Drucker Co. |
| C- 45 | Vera-Perles of Sandelwood Comp. Paul Plessner Co. | C-268 | Eat Uncle Sam Health Food. Uncle Sam Breakfast Food Co. |
| C- 47 | Campho-Phenique in Major and Minor Surgery. Campho-Phenique Company. | C-269 | Special Course No. VI Traumatic Surgery. Illinois Post Graduate Medical School, Inc. |
| C- 49 | The Calcreose Detail Man. Maltbie Chemical Co. | C-271 | The Intestinal Flora. The Battle Creek Food Company. |
| C- 95 | Everything for the Sick. Lindsay Laboratories. | C-286 | Ultra Violet Therapy in Your Office. A. S. Aloe Co. |
| C-103 | The Electron, May-June, 1930. McIntosh Electrical Corporation. | C-292 | Acidosis and Infection—Alka Zane. William R. Warner & Co., Inc. |
| C-116 | Hemo-Glycogen, The New Product Hemoglobin Compound and Liver Extract. Chappel Bros., Inc. | C-301 | Merrell's Salicylates. The Wm. S. Merrell Company. |
| C-120 | Building Resistance — Guaiatonic. William R. Warner & Co., Ltd. | C-310 | Conclusions from published research of the value of Ceanothyn as a hemostatic. Flint, Eaton & Co. |
| C-156 | Siomine (Methenamine Tetraiodide). Pitman-Moore Company. | C-318 | Blood Clinical and Laboratory Diagnosis. A book of 160 pages by Henry Irving Berger, M.D., Battle & Company. |
| C-176 | The Hormone, 24 pages and cover, published bimonthly. The Harrower Laboratory. | C-335 | The Bloodless Phlebotomist. The Denver Chemical Manufacturing Company. |
| | | C-336 | The Secret of Our Digestive Glands. J. W. Wuppermann Angostura Bitters Agency, Inc. |

- C-347 A Graphic Chart of the Treatment of Circulatory Disturbances. Merck & Company.
- C-354 Getting the Most Out of Life. Stanco, Inc.
- C-359 Vattenborg, Colonic Mobile Unit for Colon Irrigation. McIntosh Electrical Corporation.
- C-369 Burdick Zoalite Series for Infra Red Therapy. The Burdick Corporation.
- C-371 The Use of Sulphocyanate of Soda in High Blood Pressure. Reprint from The Canadian Medical Assn. Journal. The Tilden Company.
- C-374 Table for Determining Date of Delivery. The Viburno Company, Inc.
- C-377 All that joyous Aroma but less Nicotine. Health Cigar Co.
- C-379 Endocrine and other Organotherapeutic Preparations. Armour and Company.
- C-382 Three Aces and All Council Accepted. Bilhuber-Knoll Corp.
- C-383 Syrup Histosan Controls the Cough in Acute and Chronic Bronchitis, Pneumonia and other Pulmonary Diseases. Ernst Bischoff Co., Inc.
- C-391 Imhotep. Egyptian Medicine Was a Quaint Mixture of Rationalism and Magic — Agarol. William R. Warner & Co., Inc.
- C-392 Arthritis, Its Classification and Treatment. Battle & Co.
- C-393 The Cause and Cure of Spinal Curvature and Kindred Ailments. The Philo Burt Mfg. Company.
- C-396 Rational Relief of Postpartum Pains through Gynodyne Therapy. Schering & Glatz, Inc.
- C-397 Lydin, a Standardized Male Sex Hormone with the Antisterility Vitamine-E. The Harrower Laboratory.
- C-399 Nitium, Crayon, Ovule, a Medication Radioactive. High Chemical Co.
- C-401 When the Cross Roads are Reached in Hemorrhoids (Piles). Schering & Glatz, Inc.
- C-402 The First Question—Agarol. Wm. R. Warner & Co. Inc.
- C-404 Urotropin, the Intravenous Administration of the Original Formaldehyde-Liberating Urinary and Systemic Antiseptic. Schering & Glatz.
- C-405 30 "Tilden" Cough Syrups from the Oldest Manufacturing Pharmaceutical House in America. The Tilden Company.
- C-406 Produces Consistent Results in Asthenia, Low blood-pressure, Slow convalescence, Run-down conditions. The Harrower Laboratory, Inc.
- C-408 When colds hang on and coughs are stubborn remember the effectiveness of Thiocol. Hoffmann-La Roche, Inc.
- C-410 Acidosis. A Warning Sign in Pregnancy.—Alka-Zane. Wm. R. Warner & Co., Inc.
- C-412 The New Colloidal Antacid. The Wander Co.
- C-414 Laboratory Tests in Pictures—Silvogen. Ernst Bischoff Company, Inc.
- C-415 Allonal, "Roche," Its Indications in Various Fields of Medicine and Surgery. Hoffmann-La Roche, Inc.
- C-416 Obesity, Its Types and Treatment. Battle & Co.
- C-418 Diphtheria Can Be Kept from Your Family by Protective Immunization. The National Drug Co.
- C-419 Pneumonia, Special Reference to Treatment with Anti-Pneumococcic Serum. The National Drug Co.
- C-420 That Delicious Flavor. Angostura Dry, the New Ginger Ale.. J. W. Wuppermann Angostura Bitters Agency, Inc.
- C-421 Colonic Therapy by O. Boto Schellberg, Schellberg Mfg. Corporation.
- C-422 The Rationale of Cecal Medication by O. Boto Schellberg. Schellberg Mfg. Corporation.
- C-423 Four Active Products, Thyro-Ovarian Co., Pan-Secretin Co., Lydin, and Anabolin. The Harrower Laboratory, Inc.
- C-424 When Chemists Turned from Gold to Drugs, Pantopon, Roche. Hoffmann-La Roche, Inc.
- C-425 Cerebrospinal Fever (Epidemic, Cerebrospinal Meningitis, Meningococcic Meningitis, Spotted Fever), Symptoms and Specific Treatment with Anti-Meningococcic Serum. The National Drug Company.
- C-426 Our Complete Line of Physiotherapy and Health Equipment. Health Equipment Company.
- C-427 Light Therapy. Britesun, Inc.
- C-428 Light Therapy. The Burdick Corp.